THE

Journal of Materia Medica,

A MONTHLY JOURNAL DEVOTED TO

MATERIA MEDICA, PHARMACY, CHEMISTRY,

AND NEW REMEDIES.

CONDUCTED BY

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VOLUME XVI.

NEW LEBANON, N. Y.:
TILDEN & COMPANY, PUBLISHERS
1877.

INDEX.—1877.

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New Series.] JANUARY 15, 1877. [Vol. XVI.—No. 1.

A Contagium Vivum as the Propagating Principle of Infectious Epidemics.

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The old doctrine of Sydenham, that epidemic diseases were produced by an epidemic constitution of the atmosphere, is very much like that maintained by many modern agriculturists of to-day, that the propagation of the potato fungus depends upon certain atmospheric conditions, about the nature of which few of them agree. Both have the elements of plausibility and incertitude—difficult to prove and difficult to refute. Happily it appears as if the dawn of a more exact knowledge in reference to epidemics is already upon us, which it is hoped will, in time, end some of our ignorant groping, and enable us to take a more rational view of certain morbid phenomena, as well as to prevent what we are too often powerless to cure.

The evidence upon which the theory is based that infectious epidemics are propagated through a contagium vivum are:—

1. *That the infecting principle is capable of indefinite multiplication.* This is a property common only to all kinds of life, and is, moreover, displayed in a higher degree by the lower than the higher forms. An atom of oxygen, of salicin, or of any inorganic substance, has no intrinsic power of multiplying itself a single nor a hundred fold. Only matter endowed with life has the property of transforming other substances into certain uniform forms, types and compounds, beside those of indefinite increase and continuity.

The hypothesis that epidemic diseases depend upon living contagia, harmonizes with all the conditions appertaining to the propagation of vitality in the higher orders of organic life. Not all the germs or spores fall upon an appropriate soil; each is largely dependent upon appropriate conditions for rapid germination, growth, and multiplication. As the forms of vegetative life thrive with peculiar luxuriance in soils abounding in organic remains, so do the germs or spores of infections manifest unusual activity and power of multiplication among the inhabitants of the filthy purlieus of a city.

2. *The mode by which the various infections extend, fully supports the doctrine that they depend upon a living principle, not a dead miasm, or a peculiar atmospheric condition.* The germs or spores of some forms of vegetation, and low forms of animal life, are so light and volatile, that they may be transported for miles by atmospheric currents. While other seeds, such as the nut, are so heavy that their transportation to a distance never occurs, except by more uncommon artificial means. Now the germs of cholera and small-pox appear to belong to the heavier order of infections. There is not a single well authenticated instance where the germs of these diseases have been transported to a distance by atmospheric means—they always follow the usual routes of travel—spanning distances slowly or quickly, according to the rapidity or slowness of personal intercommunication. They may be transported as fomites for hundreds of miles, and such a limited amount of infection may then increase and multiply, in a densely populated region, *ad infinitum*. Others, like diphtheria, scarlet and typhoid fevers, appear to be of a more volatile nature.

That the media of diffusion, the diffusibility and the period of latency or incubation for the various kinds of vitalized contagia should differ one from the other, is wholly in keeping with the fact that all normal forms of life are subject to the same variable conditions. Indeed, had the fact been otherwise, in the instance of the supposed vitalized contagia which prey upon our bodies, it would, at least, have furnished presumptive evidence that they lacked some of the most striking characteristics pertaining to the organic world.

3. *Another evidence that the various contagia possess life, consists in the fact that they*

always reproduce and multiply strictly after their kind. The action of cold may produce rheumatism, or pleurisy, or a simple catarrh, but the action of the scarlatina infection never produces measles, nor that of small-pox the diphtheritic fever.

4. *The morbid phenomena produced by the the action of a contagium vivum is self limited.* This striking peculiarity is perfectly explicable, on the theory that some kind of bacteria or micrococci are preying upon the life and organization of the body. The torula and mycoderms, which are the ferments of fermentation, and the vibrios of putrefaction, all produce their specific changes, *cæteris paribus* within a definite time, after which they die and their influence wholly ceases. It is quite easy to understand that the same peculiarity appertains to the action of bacteria and micrococci upon the human body; each according to its kind in time and peculiarity of effects but with this difference—one mainly of degree—they are sometimes too numerous or potent for the life of the body; in other instances the *vis vitæ* survives all their predatory influences.

To close this summary presentation of the doctrine of a contagium vivum as the essential cause of infectious epidemics without calling attention to the remarkable researches of Dr. Burdon-Sanderson, Davaine, and especially Koch, on splenic fever, would be an unpardonable omission. This infectious fever, which has proved exceedingly destructive to animal and human life, especially in Russia, was investigated microscopically by Burdon-Sanderson, who ascertained that there were two kinds of contagia, one fugitive, by which he could temporarily propagate the fever, the other latent, but permanent and invisible. Koch supplemented these investigations by experimenting with the rod-like contagium observed by Burdon-Sanderson. He placed the tiniest speck of these rods within the aqueous humor, and carefully watched the results. They speedily changed their form, and after a time he observed little dots appearing, which rapidly spread until the length of the organism was studded by them; after which the organism fell to pieces and its place was taken up by long rows of seeds or spores. This experiment of Koch's was repeated and verified by Cohn. Koch inoculated healthy animals with the blood of those having splenic fever, and they invariably died of the disease within thirty hours after inoculation. He then sought to know how the contagium maintained its vitality. Dried blood having the rod-like bodies, always observed in splenic fever, possessed only a fugitive infecting power, but the fully developed spores or dust which he cultivated in the aqueous humor—though wetted, and dried again and again, permitted to remain in the midst of putrefying matter, and kept as long as four years—yet retained all their original activity in the production of this peculiar fever when injected into the body of a healthy animal.

Here we have the proof, experimentally demonstrated, of a contagium vivum as the essential cause of an infectious epidemic, and more than all, how the dust or spores of this contagion, in which the atmosphere may abound, have been produced and put in a shape for indefinite perpetuation.

The practical importance of these deductions can scarcely be overrated. They will do much to clear up the indications of treatment, and to furnish the sanitarian with an intelligent appreciation of the nature and habits of some of the worst enemies to health and life which he wishes to subdue. We have only to study more carefully the circumstances and peculiar conditions which favor the increase and spread of the various contagious spores, in order to hamper their diffusion, and timeously apply the agents best fitted to accomplish their destruction. In short, when we know all the habits of those predatory kinds of life, our ability to control and exterminate them may be fairly said to be within our grasp.

The effect of a general recognition of this doctrine, if true (the evidence in its favor appearing overwhelming), cannot be other then salutary. The physician will be led to abandon, more than ever, all mischievous interference with diseases which, as a rule, must run a definite course; especially avoiding any attempt at their abridgment, well knowing that he would be much more likely to abridge the life of the body than that of the contagium which has its temporary habitat therein. He would be strongly inclined, in all his endeavors, simply to see that the life of the body had a fair chance in its struggle with its enemy. *First*, By gently clearing away all accumulation of effete matter upon which low organisms revel, but which cumber the free play and sanitary action of the force he wishes to preserve. *Second*, By placing the body under the most favorable hygienic conditions, and *Third*, By supporting the waning strength by all the adjuvants which enlarged and cultured experience has shown to be most successful for such a purpose.—*Medical and Surgical Reporter.*

Aromatic Sulphuric Acid in Necrosis.

Dr. Ephraim Cutter, of Cambridge, Mass., reports (Boston Journal) the following:

"April 10, 1875, Dr. A., of Worcester, requested the writer to remove the necrosed alveolar process of his wife's sister. She was of middle age, pale, thin, weak, anxious, and worn. She had suffered much with her teeth. Her upper right middle and two lateral incisors were found to be loose, and their lower edges hanging below the line of their fellows. There was a fungoid, spongy swelling over the front of the diseased process. When this was pressed, pus freely exuded from several openings, and also from a softish, elastic swelling, as large as a hazelnut, situated at the dome of the hard palate inside the mouth. The loosened teeth could be freely moved in every direction with the thumb andfingers. The roots of the teeth distinctly grated against the sound alveolar process. There was a complete separation of the teeth and the bone. Dr. A. said he had thought of using the aromatic sulphuric acid, but that the disease was so extensive and the separation so complete that he regarded it as useless to try to save the teeth in any way. It appeared to the consulter, however, while the surgical extirpation would be effective and justifiable, that if free incisions were made into the swollen and spongy gums, there would be an evacuation of the contents of the dilated capillaries and abscesses; that a healthy action would be promoted by relieving this unnatural distention, and that the necrosed bone might be slowly removed by the stimulation of the aromatic sulphuric acid topically applied without destroying the teeth. It was thought that then the periosteum would lay down new bone in place of the old, and refasten the teeth in their old place. It was agreed to employ the following: ℞ Aromatic sulphuric acid, ʒ i; aquæ, ʒ i. By means of a half ounce syringe supplied with a small ivory tip, an inch and half long and one eighth inch in diameter, the acid solution was injected at first twice a day and afterward once a day. About two drams were used at each injection. The syringe-tip was deeply buried into the soft tissues through one of the openings. Pus would freely exude from the other openings, even from that in the top of the mouth, after each injection. Tonics were administered. A diet of animal food and unbolted wheat was rigidly maintained.

"From the outset of this departure a marked improvement in the soft tissues occurred; but the teeth remained loose and dangling, and Dr. A. thought their recovery doubtful. It was re-suggested that it would be an easy thing to remove them at any time if they did not rest, but that the process of replacing old with new bone was of necessity a slow one.

"In about forty days the outer incisor became solidly fixed in its old site. Then the next incisor also tightened. The middle incisor tightened slowly. In the following November it could be very slightly moved, but its edge was a little below the line of the other teeth. The other two incisors were as stiff as they ever were. A few spiculæ of bone were removed from the front of the alveolar process during the period of the treatment. In the mean time the general health of the patient improved greatly. She gained in weight, color, and strength. At the present time (July, 1876) she is entirely recovered."—*Louisville Med. News, Nov.*, 1876.

Poisoning by Digitalis.

Two young men wishing to escape conscription, obtained a large number of pills from a person who professed to be able to exempt recruits from military service, with instructions to take 2 to 4 pills daily for eight or ten days before their enrolment. One of them reported himself ill three days after entering the service, six days later he was sent to hospital, where he died quite suddenly and unexpectedly after three weeks' illness.

A careful investigation of the case elicited the following facts: The post mortem revealed no pathological change sufficient to account for death. The blood was thin and fluid, of a cherry-red color, and without a trace of coagulum. There were ecchymoses in the coats of the stomach and intestines, and the brain was anæmic.

A chemical examination of portions of the œsophagus, stomach, duodenum, and liver, gave the reaction of digitalin most decidedly; that of the blood contained in the right ventricle was negative. The pills were found to contain pulv. fol. digit. purp. gr. 1½ in each. It appeared that the unfortunate young man had taken 137 pills, or upwards of 200 grains of digitalis within five weeks, and he probably died in consequence of the cumulative action of the drug.

The symptoms presented during life were pains in the stomach, loss of appetite, nausea, constipation, pain in the head and giddiness. The patient, morover, looked very ill. The pulse was 50 to 52 per minute, the temperature normal. The odour of the breath was peculiar, and on one occasion some greenish material was vomited.

In addition to this there was dimness of vision, tinnitus, and great debility. The pupils were alike and acted well. The skin was pale and sallow.

Death occurred suddenly whilst the patient was being raised up in bed by one of the attendants. The day before he had a sudden and severe attack of syncope. The other recruit suffered in a similar manner, but recovered, having taken only 75 pills in the four or five weeks.—(Dr. Könrad Kühnhorn, Vierteljahr schrift f. geri chtl. Medizin, April, 1876.—*Canada Med. and Surg. Journ.*

Ergot in Purpura.

The following summary is given by Dr. Buckley in a paper on the subject in the last number of the Practitioner, (Nov.):—

1. The treatment of purpura, as advised in the books, is ineffective and tedious in lighter cases, and insufficient to save life in many of the severe or hæmorrhagic cases.

2. Ergot posesses a very decided power in contracting the involuntary muscular fibres, causes divided arteries to contract, acts upon the smaller arteries and capillaries, and has been proved a valuable arrest of hæmorrhage in many affections.

3. In purpura the action of ergot is very manifest, causing, when given in sufficient doses, an almost, if not quite immediate cessation of the cutaneous and other hæmorrhages.

4. The most effective method of administration of ergot is by hypodermic injection, and this means renders it peculiarly valuable in purpura hæmorrhagica, where there is hæmatemesis, so that its administration by the mouth would be impossible, or in cases where the stomach would not tolerate it.

5. While ergotin, a purified watery extract, has been advised by many, and has been found to act efficiently in many cases, its action is liable to be uncertain by reason of age or faulty preparation, and after dilution with water it soon becomes inert.

6. Fluid extract of ergot may be administered hypodermically, undiluted, and without local accident, as abscess or inflammation, if care be exercised; and its effect is very prompt and certain.

7. Ergot may be thrown under the skin in any part of the body; the gluteal and shoulder regions answer well, but the places to be preferred are about the pectoral muscles or at the sides of the chest, about half way down.

8. Severe cases of purpura require the frequent repetition, even of very large doses, whether by the mouth or by hypodermic injection; both methods may be combined.

9. Generally one or two grains of ergotin or from ten to fifteen minims of the fluid extract, hypodermically, once or twice a day are sufficient, but the former may safely be increased to five grains, and the latter to twenty or thirty minims, and repeated as often as every hour and a half.

10. Large doses relatively are required when given by the mouth and their action thus given, is more slow.

11. No fear need be entertained of any untoward effects; an ounce of fluid extract by the mouth, and seven grains of ergotin, hypodermically, have failed to give rise to any unpleasant symptoms; and from half a drachm to a drachm and a half of the tincture or fluid extract have been continued for several months without producing ergotism.

12. Other preparations of ergot may be employed internally,—as the power, solid extract, wine or infusion—the dose being proportioned to the effect required and produced.—*Canada Med. and Surg. Journal.*

Injecting the Male Bladder without the Aid of a Catheter.

For the last year Prof. McGuire, of Virginia, has made use of the following simple procedure in injecting the male bladder. He takes the ordinary rubber-bag syringe used to inject the bladder through a catheter, the nozzle of which is provided with a stop-cock, and tapers to a point. The bag is filled with warm water, all the air being carefully excluded, and the nozzle oiled and introduced into the urethra for an inch and a half. The urethra is then gently compressed around the nozzle of the syringe, the stop-cock turned, and by a gentle and continuous pressure on the bag, the water forced along the urethra into the cavity of the bladder. It is important to avoid all rough manipulations, and to inject the fluid slowly. With a little practice the patient can perform the operation quite readily himself. This method of injecting the bladder is especially applicable to those not rare cases in which the introduction of a catheter causes pain or urethral fever. The warm water may be medicated, but it is important to remember that the mucous membrane of the bladder is more sensitive than that of the urethra, and consequently these injections must be milder than simple urethral injections would need to be.

Prof. McGuire has employed this method with advantage in a case of malignant vascular tumour of the bladder, and preparatory to

the operations of lithotrity and lithotomy. In case of severe cystitis following the first of a course of lithotrity sittings, distending the bladder with water by means of a bag syringe was followed by such immediate and great relief that he was able in a few days safely to employ the lithotiste again. In a case of severe strangury, the same proceeding gave almost complete and immediate relief. It is, however in cases of cystitis and enlarged prostate that Prof. McGuire anticipates most benefit from this method of injecting the bladder. In these cases, the introduction of the catheter, and its necessary retention in the bladder for some minutes, often cause urethral fever and increased irritability of the bladder that more than counterbalance the good the injection may have done. The frequent introduction of the catheter, moreover, in the case of chronic hypertrophy of the prostate, undoubtedly has a tendency to increase the already existing trouble. In these cases the bag syringe can, with few exceptions, be substituted for the catheter. Four or five ounces of warm water, simple or medicated, are to be injected and retained for a few moments and then expelled. What will remain in the bladder will be phosphatic, irritating urine that was there before the operation, but a small portion of this diluted with water. By repeating the injection the residual fluid can be made entirely unirritating.—*Virginia Med. Monthly.*

Puncture of the Pericardium.

In a paper communicated to the Académie de Médicine, by M. Henri Roger, the author dwells upon the difficulties in the diagnosis of pericardial effusions, and he quotes in illustration two cases operated upon by Tigla and Trousseau, in one of which a thin-walled, dilated heart was mistaken for an effusion into the pericardium; in the other case an hypertrophied heart, surrounded by membrane floating in only a small quantity of serosity, was found post mortem. But even when the diagnosis is made, it is very difficult to decide on puncture, inasmuch as the grave symptoms may not be due simply to the presence of the effusion, and operation may do serious injury (in six out of fourteen cases collected by Roger, death followed so closely that it seemed to be attributable to or at least hastened by the operation). We must not forget, either, that evacuation of the serum in a case of acute pericarditis will almost necessarily be followed by pericardial adhesion.

Paracentesis of the pericardium is a far more delicate operation then puncture of the chest cavity. The mammary artery coursing along four or five millimeters from the margin of the sternum, diaphragm, the left lobe of the liver, sometimes much enlarged, the lung and pleura, and finally and most importantly, the heart itself, have to be avoided by the surgeon. M. Roger quotes two cases, one of M. Baizeau's and one of his own, in which the right ventricle was apparently punctured in operations designed for relief of effusion into the pericardium, and one hundred and two hundred and twenty grammes of venous blood respectively removed. Both cases survived the operation. Another disagreeable occurence which may happen, even if the right place be chosen, is that the puncture is followed by no escape of fluid. The pericardium, being only in lax connection with the wall of the chest, and much thicker and harder then the pleura, recedes before the trocar. With the fine needle of the modern aspirator, however, that is less likely to happen. The puncture should always be made directly from before backwards, with a slight subsequent inclination of the point of the needle downward, as advised by Dieulafoy, in order to avoid the ventricle during systole. The fifth intercostal space at a point intermediate between the sternum and nipple, but rather nearer the latter, is the place to be chosen, as a rule, for puncture. But the heart's apex, instead of impinging against the fourth space of the fifth rib, as is usual in such cases, may be lowered by dilatation, or drawn downwards by an adhesion to the diaphragm, when a lower point must be chosen for the puncture.

In only one case of the fourteen was a "true cure" effected, and M. Roger concludes that, notwithstanding undoubted improvement in the modern operation, it remains a dangerous and doubtful remedy, to be hazarded in extreme cases.—*Boston Med. and Surg. Jour.*

Choice of Sedative for the Young or Aged.

Dr. Stokes (Guy's Hospital Reports for 1876) says: "If we propose giving a sedative to the very old or very young, we must be cautious, especially in using any of the preparations of opium, as with them they are not only prepotent, but often cumulative their effects. As a consequence of this, some years past I have trusted almost entirely to sedatives other than opiates in treating children in their first septennate, and I have seen no reason to believe that any want of success has ensued from this exclu-

siveness. That such a precautionary measure is not altogether uncalled for has been impressed upon me by my experience of the method of medication adopted by the more ignorant (including nurses and nursery-maids), whose frequent habit is to increase the prescribed dose several-fold, or to repeat it with undue persistence, if it should fall short of the expected effect; with what result may be conceived when two or three minims of laudanum have been ordered for an infant. With potassium bromide and conium for the various morbid conditions incidental to teething; chloroform for administration during the paroxysm of a convulsive attack; chloral for those derangements in which insomnia is the prevailing symptom; aconite for inflammations, fevers, and feverishness generally; belladonna and hyoscyamus for many visceral disorders of a painful and obstinate nature; and combinations of these and other drugs to soothe coughs and the innumerable aches and pains of neuralgic, myalgic, or rheumatic origin—to say nothing of a host of external sedative applications, many of which are very potent—we need be under no apprehension lest we should be incapable of coping with the assaults of disease in children as effectually as we could do with one more weapon in our repertory."

For the Aged.—"If we think fit to employ opium as an anodyne or hypnotic with those who have attained to or are on the high road to second childhood, it is judicious to combine chloral and spirit of chloroform with it; the opium being prescribed in excess when pain, the chloral when restlessness, and the spirit of chloroform when cramp predominate; and the quantities of the several ingredients need not be large, as each of them intensifies the effect of the others. The addition of from ten to twenty minims of the tincture of Indian hemp, a very invigorating soporific, to such a mixture as the above is most serviceable in dealing with a heart enfeebled by advanced age or exhausting illness; and in thus prescribing it I have invariably met with an exemption from the distressing symptoms which sometimes result from the oppressive action of opiates on the respiratory system."—*Louisville Med. News.*

Irritants and Counter-Irritants.

Dr. Lauder Brunton (St. Bartholomew's Hospital Reports, 1875), concludes a very important paper on the above subject as follows:

1. Dilatation of blood vessels, and a rapid circulation through them, is advantageous for the tissues, and leads to increased growth and more rapid repair, while this arterial or active congestion is beneficial. Venous or passive congestion is injurious.

2. The application of an irritant induces dilatation of the vessels and a free current of blood through them. This will help to repair any injury done to the tissues by the irritant, so that the injury to a certain extent brings its own remedy.

3. Arterial congestion and inflammation are entirely different from and independent of each other, although they generally occur together.

4. Arterial congestion passes into inflammation when stasis begins to occur in the capillaries.

5 Stasis is not improbably due, as supposed by the brothers Weber, to coagulation of blood in the capillaries, the coagulation being induced by changes in the walls of the vessels or immediately surrounding them.

6 Pain in an inflamed part is probably due to distension of vessels and pressure on nerves by the blood being pumped with violence through the dilated arteries against the obstruction in the capillaries.

7. Pain may be relieved by lessening tension in various ways, by position, by cold, by bloodletting, by counter-irritants.

8. Cold probably relieves tension by contraction of the arteries going to the inflamed part, warmth by dilating the surrounding parts, and thus drawing away the blood from the seat of inflammation.

9. At the same time that an irritant induces dilatation of the vessels in the part to which it is applied, it causes contraction of the vessels in other parts of the body.

10. It is probable that it does not cause contraction in all parts alike, but that definite areas of the skin correspond to definite sets of internal vessels.

11. The relief of pain produced by a blister in pleurisy, pneumonia, or rheumatic inflammation of a joint is probably due to recontraction of the arteries in these parts.

12. Blisters are useful in lessening congestion in pericarditis, and in relieving the pain of inflamed joints in rheumatism.

13. The benefit derived from their use in young persons, especially those suffering from a first attack, is very great. In elderly persons it is inconsiderable.

14. The beneficial action of a blister in callous ulcer is probably due to the increased supply of blood to the part induced by its application.—*Detroit Review of Med. and Pharm.*

Diphtheria.

Dr. George Bayles, of New York City, contributes to the *Virginia Medical Monthly* for September, an account of his treatment of 20 cases of diptheria all of which recovered. He claims that it is primarily constitutional, never contagious, and that the morbid element cannot be communicated to the lower animals, nor from them to man. In order to be absolutely certain that the disease with which he had to deal was diphtheria, *before the appearance of the false membrane in the fauces* he made a small wound with the knife upon the skin of one of the extremities, if the case was one of diphtheria, the denuded surface became covered with the characteristic, false membrane within a few hours, thus giving him the opportunity of attacking the disease in its earliest stage, "aborting it."

His plan of treatment was as follows: He gave one large dose of calomel—never less than ten grains, nor more than thirty, mixed with pulverized white sugar, dry upon the tongue, and the mouth was thoroughly washed out after it had been swallowed. This was given simply for its action upon the *primæ viæ;* its vicious secondary effect being avoided. Two hours after giving the calomel one grain of quinine with three grains of Dover's powder except to children under one year—was given, and repeated every hour until ample diaphoresis was secured—two or three doses generally sufficing.

This was followed by the use of the "Elixir Iodo-Bromide of Calcium Compound" in full doses—a tea-spoonful every two hours being an average dose—as an alterative, having resolvent, tonic, diuretic and aperient properties. The elixir was also used as a spray and gargle to the throat when the pharynx became affected. Milk was given as the chief, and often the only nutriment. Brandy was often given after the third day. Ice, ice-cream, iced-champagne, etc., were given as occasion seemed to require. The entire person was bathed in a weak solution of salicylic acid, tepid, several times a day. Dr. Bayles' results are certainly remarkble, and we hope the "Elixir Iodo-Bromide of Calcium Compound" will receive more attention in the future in the treatment of this disease. That this preparation is not a nostrum or quack preparation is well known, as Tilden & Co. publish the formula, and make no secret of its mode of preparation.—*St. Louis Clinical Record.*

Diabetes—Its Nervous Symptoms.

Prof. Bouchardat (*Bull. Gen. de Therapeutique—Chicago Journal of Nervous and Mental Diseases*, July, 1875) gives the following account of the principal disorders of innervation observed during the course of glycosuria:

1. *Partial Anæsthesia* is more frequent than is perhaps generally supposed; he has observed it in the lower limbs, the thorax and face.

2. *Cramps* are among the most frequent nervous symptoms in severe cases. They occur oftener during the night, and are usually confined to the lower limbs. They disappear generally with improved regimen and exercise.

3. *Insomnia* is caused chiefly by the frequent necessity for micturition and is in great measure relieved when that necessity is removed. Exercise should be insisted on in the treatment of this condition, and an interval of some hours should intervene between supper and bed-time.

4. *Neuralgic Pains* in the region of the kidneys are complained of by many patients; sometimes they are felt in the dorsal region, more rarely in the lower limbs and articulations. Sometimes a feeling of numbness is complained of in the legs, or of chills or burning heat of the extremities.

5. *Weakness of Memory* is very frequent in diabetic patients past the meridian of life. This is not the usual senile weakness, but progresses much more rapidly, the ratio between them being as one to ten, and the faculties usually return with the disappearance of the other troublesome symptoms under treatment. Prognosis should be very cautious on this point.

6. *Inability for Mental Labor* is usually observed in diabetic patients, and improvement in this occurs with improvement in the other symptoms. In many cases a recklessness and want of care is observed to an astonishing extent. An irresistible desire for sleep after meals is often observed.

7. *Irascibility* is frequent, especially in male patients, and it seems to have a tendency to increase the amount of sugar in urine.

8. *Melancholia and Hypochondria* accompany cases of long standing, especially in males. This is due to several causes—idleness induced by the disease, premature impotence of the patient, and the feeling of being afflicted with an incurable disease.—*Detroit Review of Med. and Pharm.*

The Blister Treatment of Rheumatism.

This treatment has often been observed not only at the London Hospital, but at St. Thomas's, and some other of our larger hospitals. Dr. Peacock, in an article in *St. Thomas's Hospital Reports*, says:—"Of late years I have generally adopted in cases of rheumatism, whether simple or conplicated, the blister treatment, as recommended by Dr. Herbert Davies. I believe

the blisters to be very efficacious in arresting the inflammation in the joints, and when several are employed simultaneously or in rapid succession, in relieving the constitutional disturbance also. The benefit which results from the treatment is, I think, in direct proportion to the freedom with which the blister is applied; and though the first effect is generally to increase the febrile disturbance, and raise the temperature for a few hours, the most remarkable amendment both local and general, ensues. I have been repeatedly told by patients that the pain caused by the application even of four or five blisters at the same time, is far less then that which they had experienced from the disease. In a recent instance a man whom I had twice previously treated for acute rheumatism, in the one attack by blisters, and in the other by general means, told me that he was much more completely and more rapidly relieved by the blister treatment; which was therefore again employed in his third attack. The blisters are applied around the limbs above all the affected joints, and the surfaces are poulticed till they entirely heal. Though I have generally employed the anti-rheumatic treatment in conjunction with the blisters, when the patients have been much exhausted from the long duration of the symptoms before admission into the hospital, or from their being the subjects of old heart disease, or being weakened by any other cause, as by prolonged nursing, I have sometimes relied exclusively upon the blisters, and have never had reason to doubt the propriety of having done so. In some cases, however, of severe rheumatic fever, I have thought, on reviewing the cases, that the constitutional treatment might with advantage have been more freely used in combination with the local measures.

"In reference to the effect of the blister treatment upon the development of the cardiac complications of rheumatism, I believe it is both preventive and curative. As the heart and other internal organs become affected almost always in the earlier and more active stage of the disease, any treatment which tends to shorten the duration of this stage must lessen the liability to the recurrence of such complication; and I have no doubt that more rapid and complete relief of the local inflammation is obtained by blistering them by any other means. I think however, that the treatment does more than this. I have seen, in cases in which complication was very decidedly threatened, the progress of the internal disease apparently entirely arrested by the application of blisters to all the affected joints at the same time."—*The Doctor.*

Agents Affecting the Secretion of Bile.

Profossor Rutherford and M. Vignall (*Journal of Anatomy and Physiology*) have continued their observations on cholagogue drugs. They employed euonymin, sanguinarin, iridin, leptandra, ipecacuanha, colocynth and jalap. The animals used for experiment were invariably dogs. The method adopted was the same as in their former experiments. The animals had a full meal of flesh at 4 P. M., and the experiment was begun at 9 A. M. on the following morning, so that digestion and absorption had fully taken place. In all instances irregular muscular movements were prevented by small doses of curare, and artificial respiration was maintained; a glass canula was tied in the common bile duct, and a clamp placed on the cystic duct. The whole of the bile secreted was collected in a finely graduated glass measure, and the amount observed and recorded every fifteen minutes. Each experiment lasted an entire day. The various substances were always injected directly into the duodenum. 1. In regard to euonymin, it was found that five grains mixed with boiling water powerfully stimulated the liver. It is an active purgative in the human subject. 2. In regard to sanguinarin, three grains and one grain in two different experiments mingled with a little bile, powerfully stimulated the liver, but rendered the bile more watery, though more biliary matter was secreted in a given time. The secretion of the intestinal glands was slightly increased. 3. In regard to iridin, five grains mixed with a little bile and water very powerfully stimulated the liver. It is not so powerful as large doses (four grains) of podophyllin, but it is more powerful than euonymin. Iridin is also a decided stimulant of the intestinal glands. 4. Leptandra is a stimulant, but only a feeble one. 5. Ipecacuanha, when given in doses of sixty grains, powerfully stimulated the liver. Even three grains had an effect on a dog weighing seventeen pounds. The bile secreted was of normal composition as regards the biliary matter proper. No purgative effect was produced, but there was an increased secretion of mucus in the small intestine. 6. Colocynth is a hepatic stimulant of considerable power. It renders the bile more watery, but nevertheless increases the secretion of biliary matter. It is also a powerful stimulant of the intestinal glands. 7. Lastly, the results of the experiments with jalap showed that the drug is a hepatic stimulant of considerable power. It renders the bile more watery, but at the same time increases the secretion of biliary matter. Its effect on the liver is, however, far less notable than its effect on the intestinal organs.—*American Medical Weekly.*

Drinking Water.

Previous Sewage or Animal Contamination.

There is reason to believe that the excrementitious matters which exist in sewage are often possessed of intensely infectious properties; and that sewage mixing with water, even in the minutest proportion, is likely, by such properties, to spread particular diseases among populations which drink the water.

Thus is explained the peculiar power which impure water has, on many occasions, been shown to exercise in promoting great epidemics of typhoid fever and cholera.

The existence of an infectious property in water cannot be proved by chemical analysis, and is only learned, too late, from the effects which water produces on man. But though chemistry cannot prove any existing infectious property, it can prove, if existing, certain degrees of sewage contamination. And every sewage contamination which chemistry can trace ought *prima facie* to be held to include the probability of infectious properties.

Nearly the whole of the animal matter which gains access to drinking water consists of sewage, that is, solid and liquid excrements.

The column headed "Previous Sewage or Animal Contamination," in the accompanying analytical table, expresses, in terms of average London sewage, the amount of animal matter with which 100,000 lbs. of each water was, at some time or other, contaminated. Thus, 100,000 lbs. of the water of had been polluted with an amount of animal matter equal to that contained in lbs. of average London sewage. So far as chemical analysis can show, the whole of this animal matter had been oxidized and converted into mineral and innocuous compounds at the time the analysis was made; there is, however, always a risk lest some portion (not detectable by chemical or microscopical analysis) of the noxious constituents of the original matters should have escaped that decomposition which has resolved the remainder into innocuous mineral compounds. But this evidence of previous contamination implies much more risk, when it occurs in water from rivers and shallow wells, than when it is met with in the water of deep wells or deep-seated springs. In the case of river water there is great probability that the morbific matter sometimes present in animal excreta will be carried rapidly down the stream, escape decomposition, and produce disease in those persons who drink the water, as the organic matter of sewage undergoes decomposition very slowly when it is present in running water. In the case of shallow well water, the decomposition and oxidation of the organic matter are also liable to be incomplete during the rapid passage of polluted surface water into shallow wells. In the case of deep well and spring water, however, if the proportion of previous contamination do not exceed 10,000 parts in 100,000 parts of water, the risk is very inconsiderable, and may be regarded as *nil* if the direct access of water from the upper strata be rigidly excluded; because the excessive filtration to which such water has been subjected, in passing downward through so great a thickness of soil or rock, and the rapid oxidation of the organic matters contained in water when the latter percolates through a porous and aërated soil, afford a considerable guarantee that all noxious constituents have been removed.

It follows from what has been already stated, that chemical analysis cannot discover the noxious ingredient or ingredients in water polluted by infected sewage or animal excreta; and as it cannot thus distinguish between infected and non-infected sewage, the only perfectly safe course is to avoid altogether the use, for domestic purposes, of water which has been polluted with excrementitious matter.

This is the more to be desired because there is no practical process known whereby water, once contaminated by infected sewage, can be so purified as to render its domestic use entirely free from risk.

Nevertheless, as it is very difficult in some localities to obtain water which has not been more or less polluted by excrementitious matters, it is desirable to divide such previously contaminated drinking waters into three classes, viz.:

1. Reasonably safe water.
2. Suspicious or doubtful water.
3. Dangerous water.

Reasonably Safe Water.—Water, although it exhibits previous sewage or animal contamination, may be regarded as reasonably safe when it is derived either from deep wells (say 100 feet deep), or from deep-seated springs; provided that surface water be rigidly excluded from the well or spring, and that the proportion of previous contamination do not exceed 10,000 parts in 100,000 parts of water.

Suspicious or doubtful water is, 1st, shallow well, river, or flowing water, which exhibits any proportion, however small, of previous sewage or animal contamination; and 2d, deep well or spring water, containing from 10,000 to 20,000 parts of previous contamination in 100,000 parts of water.

Dangerous water is, 1st, shallow well, river,

or flowing water, which exhibits more than 20,000 parts of previous animal contamination in 100,000; 2d, shallow well, river, or flowing water containing less than 20,000 parts of previous contamination in 100,000 parts, but which is known, from an actual inspection of the well, river, or stream, to receive sewage, either discharged into it directly, or mingling with it as surface drainage; 3d, as the risk attending the use of all previously contaminated water increases in direct proportion to the amount of such contamination, deep well or deep-seated spring water exhibiting more than 20,000 parts of previous contamination in 100,000 must be regarded as dangerous.

River or running water should only be placed in the second class provisionally, pending an inspection of the banks of the river and tributaries; which inspection will obviously transfer it either to the class of reasonably safe water, if the previous contamination be derived exclusively from spring water, if any part of the previous contamination be traced to the direct admission of sewage or excrementitious matters.

The Manufacture of Milk Sugar in Switzerland.

BY A. SAUTER.

In a communication to the "Schweizerische Wochenschrift für Pharmacie," for the 20th of October, the author gives an account of a visit to Marbach, in the canton of Luzerne, Switzerland, where half a dozen refiners are said to make a handsome income from the manufacture of milk sugar.

The raw material used for the recrystallization comes from the neighboring Alps, in the cantons of Luzerne, Bern, Schwyz, etc; a considerable quantity is supplied also by Guyères. It is the so-called "Schottensand," or "Zuckersand," the French "Déchet de lait," obtained by simple evaporation of the whey after cheesemaking. Notwithstanding a continual rise in the price, consequent upon the demand and the increased cost of labor and fuel, the manufacture continually expands, and now amounts to 1,800 to 2,000 cwts. yearly, corresponding to a gross value of about 300,000 francs—certainly a handsome sum for a small mountain village, with but few inhabitants.

The manufacture is only carried on in the higher mountains, because there the material can no longer be used profitably for the fattening of swine, which are found chiefly in the valleys, and the wood required for the evaporating process is cheaper in the highlands.

The crude material is sent to the manufacturer or refiner in sacks containing one to two hundredweights. It is washed in copper vessels, and dissolved to saturation at the boiling temperature over a fire, and the yellow brown liquor, after straining, is allowed to stand in copper-lined tubs or long troughs to crystallize. The sugar crystals form in clusters on immersed chips of wood, and these are the most pure, and therefore of rather greater commercial value than the milk sugar in plates, which is deposited on the sides of the vessels.

In ten to fourteen days the process of crystallization has ended, and the milk sugar has finished growing (*ausgewachsen*). The crystals are then washed with cold water, afterwards dried in a cauldron over a fire, and packed in casks holding four to five hundredweights.

As the "Schottensand" can only be obtained in the summer, the recrystallization is not carried on in the winter, hence a popular saying that milk sugar does not "grow" in winter.

The entire manipulation is carried on in a very primitive manner, it being a matter of astonishment to find a specific gravity instrument in any place. The author is of opinion that with a more rational method of working, a whiter and finer quality sugar could be produced.—*Pharm. Journ. and Trans.*, Nov. 11th, 1876.

Dextrin in Urine.

On the presence of dextrin in urine and on a modification of the estimation of glucose by Fehling's solution.—M. Redon.—In analyzing diabetic urine containing but little glucose, Mr. Reichardt discovered dextrin, which he regards as an intermediate product in the transformation of starch. M. Redon proposes the following modification of the usual method for estimating glucose in urine. Several substances contained in urine, such as mucus, uric acid, and hypozanthine, reduce in the heat the copper solution, while other bodies retard the reaction or hinder the precipitation of cuprous oxide. To avoid these difficulties M. Redon proceeds thus; Precipitate the creatinine by an alcoholic solution of zinc chloride; filter, add to the filtrate subacetate of lead and sodium carbonate, evaporate to dryness, and dissolve the residue in alcohol of 94°; then add animal charcoal if the solution is colored; evaporate the alcoholic liquid, take up the residue with distilled water, and a solution is obtained which gives delicate reaction for glucose. The last-named solution, obtained by operation on 50 grammes of urine, is treated in the usual manner with Fehling's solution, or the cuprous oxide separated by filtration and washed with hot water is dissolved in hydrochloric acid and treated with potassium permanganate.

Monthly Summary.

Colchicine—Its Physiological Action.

A report (*London Lancet*, 1876) summarizes the action of colchicine as follows:

1. It produces complete loss of sensibility due to paralysis of both the peripheric and centric nerve endings, hence reflex excitability is abolished, but the motor nerves and the muscles retain their excitability till death occurs.

2. The heart continues to pulsate even after the paralysis of the central nervous system has commenced, and blood pressure remains long unchanged, and paralysis of the inhibitory nerves of the heart occurs at a late period.

3. Respiration becomes gradually less frequent until it is entirely arrested. In warm-blooded animals, especially in cats, the mucous membrane of the whole gastric and intestinal tract is swollen and strongly injected, and the intestines contain bloody mucus. There is diarrhœa, vomiting and colicky pain during life.

4 The kidneys are strongly hyperæmic and their secretions diminished.

5 The action of colchicine is slow. Death occurs only after several hours, and Schiff observed that the amount of the dose has scarcely any perceptible influence on the intensity or rapidity of the action of the poison. *Detroit Review of Medicine and Pharmacy.*

Sanguinarina—Its Physiological Action.

Dr. R. M. Smith (*American Journal of Medical Sciences*, 1876) reports in detail one hundred and fifty-three experiments made with this alkaloid on cats, dogs, rabbits, frogs, guinea pigs, pigeons etc. He concludes his report as follows: (1) Sanguinarina destroys life through paralysis of the respiratory centre. (2) It causes clonic convulsions of spinal origin. (3) It has no effect on either the motor or sensory nerves. (4) It causes marked adynamia and prostration from its depressing action on the spinal ganglia and muscles. (5) It decreases reflex excitability, through irritation of Setschenow's centre and by ultimate paralysis of the spinal ganglia from large doses. (6) It produces in cats, dogs, and rabbits a fall of pulse and blood pressure, the fall of the latter being preceded by a temporary rise after the administration of proportionately small doses. (7) The fall of blood tension is caused by a paralysis of the vaso-motor centre and by a paralysis of the heart itself, probably of its muscular structure. (8) The temporary rise in blood pressure is due to irritation of the vaso-motor centre, previous to its paralysis by small doses. (9) The reduction in the pulse is due to direct action of the poison on the heart, through paralysis of its motor power. (10) Sanguinarina has no action on the liver. (11) It causes marked salivation. (12) It slows the respiratory movement, by prolonging the pause after expiration. (13) This reduction is caused by loss of tone of the respiratory centre. (14) Small doses cause an irritation of the respiratory centre, and consequently an increase in the number of respiratory movements. (15) Applied locally sanguinarina soon causes complete paralysis of striped muscular fibre. (16) It always dilates the pupil. (17) It is an emetic. (18) It always lowers the temperature. (19) When introduced into the circulation it diminishes muscular contractibility.—*Detroit Review of Medicine and Pharmacy.*

The Influence of High Altitudes on the Progress of Phthisis.

Dr. Dennison, of Denver, Colorado ("Boston Medical and Surgical Journal"), read a paper before one of the sections of the International Medical Congress of Philadelphia, September 7th, on the influence of high altitudes on the progress of phthisis. His deduction of analysis of cases were as follows: 1. Cool, dry climates are best. 2. Favorable climatic attributes, such as diathemancy and dryness, are increasingly found with increasing elevation. 3. High altitudes are favorable in incipiency of chronic inflammatory and hœmorrhagic cases of phthisis; in others, the more acute the inflammatory process, or more active the pulmonary hœmorrhage the more tentative should be the rise in elevation. 4. Partial recovery necessitates permanent residence. 5. High altitudes become unfavorable or negative in proportion as phthisis is complicated with certain cardiac disease or the stage of "softening" in acute cases, with extensive deposit or nervous irritability, and lack of desirable will-power. 6. Early change of climate and mode of life are more positively favorable to cure in a resort to high altitudes. 7. Stimulating effect of high altitudes on respiratory organs is a most important agent in arresting chronic phthisis. 8. High altitude is palliative or curative with or without change of occupation and out-door life. 9. In incipient cases the patient should receive benefit of doubt, in view of possibility of error in declaring non-existence of phthisis. 10. Resort to a well-chosen, elevated climate, should form part of a physician's advice to every consumptive, unless specially contra-indicated.

Puerperal Eclampsia.

Dr. H. F. Campell "American Journal of Obstetrics," in a very elaborate paper, reaches the following conclusions respecting puerperal eclampsia:

1. At the prsent time we can not recognize either cerebral plethora, cerebral anæmia, uræmia, or other toxic condition of the blood as furnishing a uniform etiology for puerperal eclampsia.

2. The proximate cause of puerperal eclampsia is nervous irritation.

3. To accept this to many a manifest truism is to make a certain advance in the relinquishment of the uncertain, conjectural and unknown.

4. In view of this cause, the sole indication of all treatment is to be quiet and to subdue irritation.

5. To meet this indication we have opium by hypodermic injection with atropia. Next to opium is blood-letting, or better, the two may be combined.

6. In regard to the bromides, to chloroform, to chloral, to quinine, to applications of cold affusions, as well as to a large number of other remedies, one common therapeutic endowment seems, in varying degrees, to be possessed by them all; that they all, venesection, nervous sedatives, are subduers of nervous irritation, and that, falling into singular coincidence by general consent, their therapeutic action, like that of venesection, is accompanied by one common physical result—that of lessening the amount of blood in the brain.

India-Rubber Cloth in Diseases of the Skin.

Since 1868, M. Hardy, of Paris, has been employing india-rubber cloth in place of poultices or local baths, the cloth being composed of a layer of caoutchouc adherent to a piece of cotton, and forming an impermeable tissue. This is only applicable to the limbs and head, and for the latter region he makes use of vulcanized rubber caps. After a certain time the part enveloped becomes not disagreeably warm, and then an abundant sweating takes place, under the influence of which, the crusts and scales which cover the skin are loosened, the epidermis spreads over the ulcers, and the skin becomes softened. The results obtained are similar to those obtained by poulticing, but for many reasons, preferable. Daily experience in the Höpital Saint Louis shows a great rapidity in the modification of the skin; two or three days of application suffice to completely clean the scalp when covered abundantly with scales of eczema, etc. After forty-eight hours' application of the rubber cloth upon hands affected with chronic eczema, with fissures and cracks in all directions, the wounds become cicatrized and the skin recovers its suppleness. This treatment is of greatest value in eczema during the second stage. Itching is rarely removed by this method. In ecthyma the pustules open, and the cure proceeds very quickly. A trial of oiled silk shows that it does not take the place of the india-rubber cloth. The limbs should be completely enveloped, but the cloth ought to be tied only at the ends, forming, between the ligatures, a large sleeve. It should be kept on for a considerable time, and the patient should be kept in bed.—This method is also of service in psoriasis and chronic lichen.—*Virginia Clinical Record.*

Coxalgia—Its Treatment.

The surgical section of the International Medical Congress, after hearing a paper on the above subject by Dr. L. A. Sayre, adopted the following views. No. 2 was not adopted unanimously. (*Medical News and Library*, October, 1876):

1. Morbus coxarum is a disease most frequently met with in early childhood, or the age of reckless indifference.

2. It is almost always of traumatic origin, and not necessarily connected with a vitiated constitution.

3. Rest and freedom from pressure of the parts involved, while at the same time the rest of the body is allowed free exercise in the open air, and a nutritious diet, is the best treatment that has yet been devised for this disease.

4. If this plain of treatment is adopted in the early stages of this disease, the majority of cases will recover with nearly, if not quite, perfect motion, and without deformity.

5. In the advanced second stage of the disease, when absorption of the effused fluid cannot be produced, then it is better to puncture or aspirate the point, and remove its contents, than to leave it to rupture by ulceration.

6. In the third stage of the disease, when the treatment recommended has been properly applied without satisfactory improvement, but progressive caries continues, the exsection of the diseased bone is not only justifiable, but in many cases absolutely necessary.

7. The operation of exsection of the hip is easily performed, and in itself attended with little or no danger.

8. After exsection of the hip joint in cases of progressive caries, the recovery is much more rapid and certain, and infinitely more perfect as to form, motion, and the usefulness of the joint and limbs than when left to the slow process of nature.—*Detroit Review of Medicine and Pharmacy.*

A Living Child Removed by Abdominal Section Two Hours After the Death of the Mother.

At a meeting of the Phila. Obstetrical Society as reported in the *American Journal of Obstetrics* for August, Dr. P. A. Veronden, of the Netherlands, presented by letter an account of the removal by him of a living fœtus by abdominal section, two hours after the death of the mother. The woman had consumption, and the father had enjoined the doctor to use every means to administer baptism to the child in case of the expected death of its mother. He arrived two hours after the mother's death, and finding the fœtal heart still in motion, operated immediately and produced a "living fœtus not yet six months of age." "It was prudently brought to the parish church, received the holy baptism, and lived still several hours after that ceremony."

Cholera in India.

Golwood, a village of 200 people, on the Bombay and Broad Railway, has been the scene of one of the most frightful outbreaks of cholera ever known. Over half of the population died in three days. The disease appeared at noon on the 4th inst., and before daybreak next morning there had been fifty-seven deaths. On the 8th all the survivors fled, but were refused admission by the adjacent village. The disease displayed extreme virulence, some cases proving fatal in twenty minutes. In these cases the ordinary cholera symptoms were absent, and the body at first stroke of the disease became livid, convulsed, and shrunken. There is no resident doctor in the village, and medical help was some time in arriving. Gross neglect of sanitary measure is the apparent cause, as it is stated that the people were living in inconceivable filth. Cholera appears to be unusually prevalent in India this year, outbreaks being reported from various quarters—none, however, approaching that of Golwood in violence.—*Med. Times and Gaz.*

A Hospital in a Crater.

The Board of Physician of the Neapolitan Hospital for Incurables have determined to build a hospital in the crater of Solatana, lying between Naples and Pozzuoli, in Southern Italy. The vapor that arises from the crater has been found to be charged not only with sulphur but also with arsenic,and it is said that several persons suffering from lung diseases have been restored to health by inhaling this vapor for a few weeks.—*The American Medical Weekly.*

The Inutility of Cutting the Frænum.

In new-born infants, by Dr. Bailly:—The author thinks that division of the *frœnum linguœ* is perfectly useless in new-born children, and can even become dangerous in cases in which the deep parts are divided, which contain important vessels. According to M. Bailly the frænum has no effect on suction and on articulation of words. Relative to suction it is to be remarked that very often a very decided frænum is only recognized at the end of several days during which the child has not failed to suck quite regularly. Sometimes, even, it is only at the end of several months that chance discovers this condition in children otherwise thriving,—proof, that as far as sucking was concerned there was no inconvenience. It is scarcely supposable otherwise, considering its extensive frequency, that the frænum does escape notice in plenty of children in country districts where the doctrine which concerns it has not penetrated, and where were it recognized, no one would probably be found capable of performing the operation; a condition which does not prevent infants from nourishing themselves and thriving like others.

M. Bailly inclines to believe the reproach is no better founded as to its effect on the articulation of words. Although having less complete evidence in regard to this, he cites the case of a woman of twenty-six years who has no defect of pronunciation, and whose tongue cannot pass beyond the line of the teeth.—*Canada Medical and Surgical Journal.*

Chloral Plaster in Neuralgia.

Dr. Solari, of Marseilles, says the *Medical Examiner*, recommends the chloral plaster as an excellent application in cases of neuralgia and of nervous pains resulting from exposure to cold. The plaster is easily prepared by powdering the chloral over a common pitch plaster, one to two scruples of chloral for every four square inches of the plastsr. Care is taken not to incorporate the chloral with the pitch. It is applied for twenty-four to forty-eight hours; when removed, the skin is found covered by a number of small vesicles; these are opened, and the part then covered with a cerate dressing. Generally speaking, it will be found that the pain has disappeared before the vesicles heal. Dr. Solari states that numerous cases of lumbago, intercostal and other forms of neuralgia, ect., have been rapidly cured by this simple method.—*Nashville Journal of Med. and Surg.*

Cinchona cultivation in Burmah is said to have been enthusiastically undertaken by the natives.

Fat Meat as an External Application.

In the *Virginia Medical Monthly*, Dr. W. T. Ennet, of North Carolina, relates the following experience in diphtheria:—"My aunt, who, was in Hartford two years ago, when the disease was raging so terrifically there, being at my house this summer, when it was killing whole families in Wilmington, and was also terribly fatal in the surrounding country, asked me to try the Hartford doctors' treatment, which was the same as ours, with the exception of external application of 'fat meat.' I could not nor cannot see the virtue, but promised to try it; I used it, and my patient got well. I still did not look upon it as affecting the disease at all. I used it again and again, and the patients all got well. I tried to study out some physiological action, but could not. I wrote to an eminent physician in Hartford, and he writes me, 'We regard it as an old woman's remedy; but the doctors all use it, and since its use the mortality has not been more than one-third. What it is and why it is, I don't know; but might it not have some antidotal action on the poison?' Since then, I was called in consultation in the adjoining neighborhood, where the attending physician had lost three or four in the one family, and another patient was almost dead. I was almost ashamed to recommend my fat meat, but I did it, and the child got well. Of course, we used all other necessary treatment. I certainly did not rely upon it alone; but, as it cannot possibly do any harm, I shall continue to use it as an external application."

Professor J. Lewis Smith, of New York, considers fat salt pork to the throat very valuable in anginose scarlatina. He finds it a safe and efficient counter-irritant, so decided in action that some skins cannot support it but for a short time.—*The Canada Medical Record.*

Umbilical Cord—Its Congenital Ulceration.

Dr. J. F. Jenkins (*Amer. Jour. Obstet.*, Oct., 1876), says that he attended a lady in premature labor from albuminuria, at the end of the eighth month. When the membrane burst the liquor amnii discharged was seen to be almost pure blood. The child was dead and very pallid, apparently exsanguinated. He estimated that there was at least a quart of blood in the amniotic cavity. On looking for the origin of the hœmorrhage, a small perforation was found in the umbilical cord, about half an inch from its abdominal insertion. The cord was much narrowed at this point, but not twisted. A microscopical investigation showed that the fatal hœmorrhage into the amniotic sac, resulted from rupture of the umbilical vain depending upon fatty degeneration and consecutive fragility. A case almost unique.—*Detroit Rev. of Med. & Phar.*

Atropia as an Antidote to Hydrocyanic Acid.

JACKSON. (*Druggist's Circular*, Jan., 1876.) In experimenting on dogs, Dr. J. says: Sulphate of atropia, in doses of one-fourth of a grain, injected under the skin, gave prompt relief in every case, even when large doses of the acid has been given. When the two poisons are administered at the same time none of the effects of prussic acid are developed; but if as much as a grain of sulphate of atropia be injected all, the symptoms of atropia poisoning are observed. In some instances the antidote was withheld until the animal would fall down, and the respirations would be as few as six per minute, the dog being unconscious, then one-fourth grain of the antidote would relieve him immediately.—*Chicago Medical Journal and Examiner.*

New Use of Quinine.

The *Clinic* quotes from the *South. Med. Record* the reports of quinine, founded upon its well-known influence on the white corpuscles, and therefore upon suppuration. In the first case six grains of quinine, dissolved in two-thirds of an ounce of water, were injected into the cavity of a suppuration pleura, and the discharge of pus rapidly diminished. An ointment of quinine (10 gr. to ʒ j.) was applied to an ulcer on the leg, of two years standing, and associated with initial heart disease. In two or three days suppuration diminished, then healthy granulations appeared, and the ulcer was rapidly healed. The third experiment was on a mammary abscess, treated by the injection of quinine (gra. 10 to ʒ j. of water) *Chicago Medical Journal and Examiner.*

A California paper state that a San Francisco firm buys, at forty cents each, all the dogs which die or are killed in that city. At their manufactory the skins of the dogs are removed and sold to the tanneries; the hair is taken off and sold to the plasterers; the hide tanned, made into gloves, and sold in the market. The denuded carcass is thrown into a huge cauldron and boiled until the bones are easily separated from the flesh, when they are removed and sold to the sugar refineries, where they are ground to clarify sugar. The oil that rises to the surface of the boiling mass is skimmed off and made into cod liver oil, and the remainder is used for fattening hogs.

Tumours of the Decidua.

Professor Rudolf Maier (Virchow's *Archiv.*, May, 1876) has had two opportunities of observing new growths in the decidua, and the following are the results of his researches:

1. There are tumours of the decidua, true deciduomata.

2. These tumours, as it appears, only form in the uterus.

3. The new formations, so far as present knowledge goes, resemble in structure the areolar spaces of the early fenestrated decidua.

4. Primarily, the boundary wall of these spaces and the contents are composed of only a single element, decidua cells.

5. Only very little connective tissue enters into the arrangement.

6. Single parts of the tumour are composed throughout of solid tissue, and others exclusively of decidua cells.

7. The vascular portion coincides primarily with the connective tissue portion, which in the true tumour tissue is only small, and chiefly present on the outer side of the tumour when it is in connection with the wall of the uterus.

8. The new formations soon form circumscribed nodular growths, soon broader wall-fixed expansions.

9. The occurrence of pregnancy or catamenial irritation has an influence on their formation.

10. By their faster or looser attachment to the walls of the uterus, they may acquire clinical and gynæcological importance, quite independent of their possible interference with utero-gestation.

Toxic Properties of Glycerine.

In the *Bulletin General de Therapeutique*, July 30, 1876, is a very interesting account of an elaborate series of experiments by MM. Dujardin-Beaumetz and Audige on the poisonous effects produced by large doses of glycerine. The experiments were made on dogs by injecting the substance under the skin. The following are the conclusions at which the authors arrive:

1. Glycerine chemically pure causes in the dog, in twenty-four hours after being introduced under the skin, deadly effects where the dose is in the proportion of 8 to 10 grammes (120 to 150 grains) to a kilogramme (35 ounces, 120 grains), of the weight of the dog.

2. The toxic effects (acute glycerism) are comparable within certain limits to those of acute alcholism.

3. The necroscopic lesions in glycerism are analogous to those of alcoholism, which tends to induce the belief that the toxic effects of these two substances are almost the same.

4. From a therapeutic point of view, there may, therefore, be some danger in introducing glycerine into the economy in too large quantities.

Hints on Varnishing.

Before any article is varnished it should be thoroughly cleansed from all grease spots with plenty of hot water, soap, and soda, which must be well washed off. It is also essential that the article to be operated upon should be perfectly dry.

The following is a good varnish for rustic seats: Boil 1 quart of boiled linseed oil and 2 oz. of asphaltum over a slow fire till the asphaltum is dissolved, the mixture being kept stirred to prevent it boiling over. The gives a fine, dark oak color, is not sticky, and looks well for a year.—Or, first wash the furniture, with soap and water, and when dry, on a sunny day brush it over with common boiled linseed oil; leaves that to dry for a day or two, then varnish it over one or twice with hard varnish. If well done, this will last for years, and prevent annoyance from insects.—A common black varnish for wood and iron may be made by mixing 1 gallon of coal-tar with ½ pint of spirits of turpentine and 2 oz. of oil of vitriol, stirring the mixture briskly until the ingredients are thoroughly incorporated.—A fine kind may be made by adding 4 oz. of asphaltum and 8 oz. of burnt umber to 1 gallon of of boiled linseed oil. Grind the umber smooth with a little of oil, and add it to the asphaltum previously dissolved in a pint of the oil by heat, then add the remainder of the oil; boil, cool, and thin with turpentine to the proper consistency, or melt 2 lb. of asphaltum in an iron pot; add of hot boiled oil 1 pint, mix well, cool, and add 2 quarts of oil of turpentine,—A good varnish for white wood is made by dissolving 3 lb. of bleached shellac in 1 gallon of alcohol; strain and add 1½ gallon more spirit. Fine, dry warm weather should always be chosen for varnishing operations.—*Boston Journal of Chemistry.*

How They Pull Children's Teeth in Paris.

In the children's hospital in Paris, the nurse goes round at eight A. M. and gives to each child under sentence from thirty to fifty grains chloral hydrate. The dentist follows in one hour, and the child wakes up an hour or two after wards and wonders what has become of its tooth.—*Pacific Med. and Surg. Journ.*

Poison-Oak Eruption.—By E. H. Bernard.

I have just read in your journal an article by Professor L. P. Yandell, Jr., on "Poison Oak."

I think I can still add one to the list of reliable remedies for the torment inflicted by that infernal thing; to-wit, fluid extract of gelsemsempervirens, applied by simply brushing it over the affected part with a feather. Some few weeks ago I had to prescribe for a boy who had got the poison, of all places in the world, all over the genital organs. The burning sensation invariably came on about sunset, and tormented the patient all night long, subsiding always at daylight. (Here was a good hint to try quinine, but I failed to use it.) After trying about a dozen of so-styled "infallibles," I heard of the gelseminum, and concluded to try it; for I was just then "at the end of my row," and badly bothered to find a remedy. The first application gave complete relief, and the patient slept soundly all night. After that the gelseminum was applied three more times, and that ended the job; and a most devilish, troublesome job it was until the gelseminum let me out of the scrape. Some thirty years ago I saw sulphate of copper (two grains to one ounce of water) used in a great number of cases, and with general success; but lately I have known it to fail several times. Should I ever be called upon to treat another case, I would certainly try quinine at the start. The gelseminum treatment may be already known to many or all readers of the *News;* but if not, they are abundantly welcome to the hint. I do not propose to take out a patent for it just at present. —*Atlanta Med. and Surg. Journal.*

Poison by Ivy.—Bromo-Chloralum.

Having read the above treatment of poison by OAK, we could not let the opportunity pass of calling attention to a remarkable case of Poison by Ivy, relieved in a very short time by Bromo Chloralum, and think the use of Gelsemium with it would be attended with excellent results.

During the summer a farmer came to us with both hands and arms enormously swollen from Poison with Ivy handled in the hay-field. The heat and pain were intense. Having used the Bromo in erysipelas with success, and acting on Dr. Baker's theory of its power to neutralize or decompose poisons, I put his hands in a bowl of Bromo diluted one-half with water, and sponged the arms with it; the application was cooling, the inflammation subsided, pain lessened and in half an hour he could work his fingers; the deep red hue of the arms subsided and in two hours he went home. He kept the arm and hand covered with cloths during the night moistened with same strength, and in the morning was able to attend to his affairs.

Imperfect Mastication as a Cause of Diarrhœa.

Dr: A. W. Edis calls attention (*The Practitioner*, April, 1876) to what he justly considers a frequent cause of diarrhœa, viz., deficient mastication from defective or decayed teeth. It is also most certainly a most frequent cause of dyspepsia in various forms, and the only mode of relief for these ailments is by having adjusted properly in the mouth artificial teeth to assist in mastication.—*Dental Cosmos.*

Syrup of Coffee.

The Druggist's Circular gives the following formula:—

Roasted coffee.....2 troy ozs.
Crushed sugar.....28 troy ozs.
Distilled water....a sufficient quantity.

Moisten the coffee, previously reduced to a moderately fine powder, with half a fl. oz. of distilled water; introduce it into a conical glass percolator and gradually pour distilled water upon it until 16 fl. oz. of infusion have passed. Add this to the sugar contained in a glass percolator, in the orifice of which a piece of soft sponge has been introduced; and in order to prevent the immediate escape of the liquid a cork is to be tightly fitted in the tube of the percolator at the bottom. The whole then to be closely covered and set aside for about two hours or until the sugar has dissolved down to half its former bulk. Then the cork can be removed, and the liquid allowed to drop. If the liquid has all passed and there still remains a quantity of undissolved sugar in the percolator, pour it again upon the sugar until the desired result is effected. This last proceeding is, however, entirely unnecessary and only occupies time. An essential precaution, and on this simple mechanical contrivance depends the success of the entire process, is to carefully insert the sponge in the orifice—not too tightly, but also not too loosely—*just sufficiently close to allow the syrup to pass drop by drop.*

A Clairvoyante Trapped.

A lady of distinction in Milan, affected with cancer, was in the habit of consulting a noted somnambulist in Bologna. She died whilst being cured, and her husband, who did not till then know of the imposition, sent to the clear-sighted doctress a lock of his dead wife's hair.

The result was more medicine. The husband then sued the woman and got damages to the amount of $8,300.—*Pacific Medical and Surgical Journal.*

Oxygen in Hydrophobia.

THE following case of apparently successful treatment of hydrophobia is reported in the *Allgemeine Medicinische Central-Zeitung:* A girl of twelve years was bitten in the hand by a rabid dog. The wound bled but little, and extended into the cellular tissue. It was immediately cauterized with nitrate of silver, and healed almost completely within seven days. About this time the child was seized with an unusual irritability. On the seventeenth day distressing dyspnœa set in, with free inspiration, but groaning and spasmodic expiration, and swallowing was almost impossible. The pulse was accelerated, the flexor muscles of the fingers were contracted, and no evacuation of either rectum or bladder took place for twenty-four hours. A quantity of about three cubic feet of oxygen gas was administered by inhalation, which afforded almost immediate relief, and produced complete cessation of the symptoms within two hours and a half. On the next day the child had another attack, with chonic cramps of the muscles of the back and extremities, dyspnœa, and complete coma, all of which symptoms were removed after forty-five minutes by the administration of oxygen. Slight attacks of dyspnœa recurring during the next ten days were treated in the same manner, and camphor monobromide was administered for three weeks more.—*New Remedies.*

Chemical Porcelain.

A new kind of pottery ware has been invented by Mr. R. W. Wallace, who gives the material the name of "Chemical Porcelain."

This porcelain appears to be a happy mixture of natural products, fire clay, etc., which makes ware of extraordinary quality. As it has been submitted to Professor Noad, we shall give his opinion of its merits, without comment on our part:

"In this invention the kaolin in porcelain is replaced by a mineral material, and besides being remarkably strong, it will resist the most extreme variations of temperature. I selected seven vessels of different sizes and shapes, and saw them thrown, without any previous annealing, into a furnace, where they were allowed to remain till white hot, when they were removed and thrown into cold water. They all stood the crucial test perfectly.

"I examined the vessels when cold, and found them all perfectly sound and unaltered.

"I am not acquainted with any porcelain which could be subjected to this ordeal with such satisfactory results.

"I saw concentrated oil of vitriol boiled for half an hour or more in a double-bent tube made of this material. Whilst boiling, I caused cold water to be thrown into the tube; this, of course, caused furious boiling, almost amounting to explosion. I then had the tube plunged into cold water, but it remained perfectly sound. I afterwards examined the acid, but found in it neither silica nor alumina. I am satisfied, therefore, that this new compound may be substituted for platinum in the construction of vessels for the continuous concentration of sulphuric acid; and, in fact, for every other chemical purpose for which platinum and silver are now considered indispensable, *e. g.*, stills and worms for pharmaceutical purposes, for refining nitric acid and other acts, for pots for the manufacture of phosphorus, iodine, etc., for evaporating dishes, retorts, etc., which are now made of Berlin or Meissen ware. The cost of the production of articles of this compound bear so slight a proportion to that of the platinum and silver vessels now in use, that the saving in the original cost of the porcelain will be not only very great, but a large saving in the shape of interest upon the money sunk in the purchase of these metals, will be effected, and also as there is no action on the porcelain, the chemicals produced would be much purer; as, for instance, sulphuric, citric and tartaric acid would contain no salts of lead, which would be of great advantage to the consumer."

There is no doubt this material supplies a want long felt by chemical manufacturers; and if, as we believe it is intended, a company is formed to work the patent, it cannot fail to be a success.

Albertite.

A very curious mineral, known as Albertite, is found in New Brunswick. It occurs in connection with calcareo-bituminous shales, and has been by some regarded as true coal, by others as a variety of jet, and by others again as more nearly related to asphaltum. The true nature of the mineral was made the basis of a law suit in Scotland a few years ago, in which the amount involved was something more than a million of pounds sterling, as the decision settled the question of the liability to pay a royalty. It resembles asphaltum very closely, being very black, brittle and lustrous, and like asphaltum, is destitute of structure, but differs from it in feasibility, and in its relation to various solvents. It differs from true coal in being of one quality throughout, in containing no traces of vegetable tissues, and in its mode of occurrence as a vein and not as a bed. The vein occupies an irregular and nearly vertical fissure, and varies from one inch to seventeen feet in thickness. It has been mined to the depth of 1,162 feet. The accompanying shales

are abundantly filled with the remains of fossil fishes, and it is not improbable that from these, in part at least, the mineral was derived, existing at first in a fluid or semi-fluid state. Vegetable remains are almost entirely wanting in the shales. During twelve years since the discovery, there have been shipped 154,000 tons of Albertine, chiefly to the United States, where it has been used for the manufacture of oil, and for admixture with bituminous coal in the manufacture of illuminating gas. It is admirably adapted for either of these purposes, yielding one hundred gallons of crude oil, or 14,500 feet of gas of superior illuminating power per ton.—*Paper Trade Journal.*

Possible Errors in the Employment of Nitric Acid to Characterize Biliary Pigments.

BY P. CAZENEUVE.

Translated by Josephine Chevalier.

Gmelin has endowed clinical chemistry with a colored reaction, which constitutes a ready means of determining the presence of biliary pigments in urine. This reaction consists, as is well known, in pouring nitric acid along the sides of the glass containing the suspected icteric urine. The acid, reaching the bottom of the glass, and by diffusion acting upon the biliary pigments, causes the latter to undergo certain phenomena of coloration, producing a series of zones colored in yellow, green, blue and red.

We desire to guard experimenters against a certain phenomenon produced by this reagent when applied to alcoholic solutions supposed to contain the coloring matter of the bile.

Alcohol exercises a reducing action upon nitric acid, transforming it into nitrous acid, and producing nitrous ether, which is set free. The reaction may be produced upon a mixture of alcohol and nitric acid without yielding any coloration. If, on the contrary, the nitric acid is poured cautiously along the sides of the vessel containing alcohol, so as to have it reach the bottom, the two super-imposed liquids will then react upon each other very slowly. In a minute a magnificent greenish blue zone appears, then another one, yellowish green in color, occurs just below the former, and finally a reddish hue is formed in the upper layer of the alcohol. In short, we obtain the different phases of the formation of nitrous ether. The nitrous acid, formed by the reduction of the nitric acid, first appears accompanied by a slight quantity of hyponitrous acid—whence these green, blue and yellow tints—and the alcohol is progressiveiy converted into ether; the whole finally becomes colorless. This colored reaction appears even in dilute alcohol.

Thus we see the importance, when applying Gmelin's reaction for the detection of biliary pigments, of evaporating the alcohol before the intervention of the acid, or of operating upon aqueous solutions, in order to make this rapid reaction reliable.—*Réportoire de Pharmacie et Journal de Chimie Médicale, July,* 1876.

Lactic Acid as a Hypnotic.

On the 15th of March, Herr E. Mendell read a paper before the Medical Society of Berlen, on the Hypnotic Properties of Lactic Acid, and referring to the observations of Preyer and Lother Meyer on this subject, he said that its effects, when administered by the mouth, either pure or in the form of the lactate of soda. were uncertain, but he had found very good results from its use in enemata in a large number of cases. The dose of lactic acid which he recommended was five to twenty grammes (75 to 300 grains) mixed with an equal quantity of lactate of soda. The use of lactic acid was especially recommended: 1. In cases of insomnia in the course of debilitating diseases, or during convalescence from them, after hæmorrhages, etc. 2. As a calmative in the excitement of the insane; 3. As a remedy in certain psychoses, in regard to which its precise indications must yet be determined.

In a discussion which followed at the next meeting, Harr Seuator said that he had used lactic acid, either in divided doses, two grammes (155 grains) being given in the course of a day; or in single doses of five to ten grammes in gaseous water, or as lemonade. With the first-named mode of administration no sleepiness was observed. On the other hand, a large single dose produced pure sleepiness, although lactic acid could not be compared, as regards strengh or duration of action with morphia or with chloral hydrate. There was, however, a troublesome after-effect, which had not been noticed by Herr Mendel or by Lother Meyer—the occurrence of rheumatic pain; these he had observed twice, once in a phthisical patient, the other time in a man who had frequent attacks of muscular rheumatism. Rheumatic pain had also been observed in giving lactic acid with other objects, such as the treatment of diabetes, etc.—*New Remedies.*

Ascites Due to Scirrhus of the Liver.

Dr. Morris.—A few weeks ago while in Philadelphia, I was invited by Dr. Atlee to see an interesting case. Dr. Atlee received a telegraphic dispatch asking him to come to Salt Lake City to operate on a lady for ovariotomy; being

unable to comply, she was brought to Philadelphia. The abdomen was enormously distended, and the dyspnœa and other symptoms being of an alarming character, Dr. Atlee immediately performed paracentesis. About three gallons of dark or purple serum were drawn off. The color of the fluid led Dr. A. to remark that the disease was malignant, and a subsequent exploration revealed scirrhus of the liver. In ascites from malignant disease the serum is always of a dirty purple; while in ascites from cirrhosis or other diseases, the fluid is generally clear. In these cases it is difficult to make a diagnosis before tapping.

Dr. Arnold—According to Frerichs, out of 91 cases of cancer of the liver, jaundice was present in 39, while peritoneal effusion occurs in the majority of cases, viz. 48 in 80. The occurrence of either jaundice or dropsy depends upon the location of the disease. In the former it is due to pressure upon the bile ducts, in the latter to pressure upon the portal vein.—*Baltimore Physician and Surgeon.*

Testing the Urine for Albumen.

Dr. W. H. Kestiven recommends the following method, in the *Lancet:*

Take a thin glass microscopical cover (about one inch square is the best size); on this place a drop or two of the urine to be tested, then, with a pair of ordinary dressing forceps, hold the cover over the flame of a candle. At the same time the under surface of the glass will be blacked by the smoke, and the urine will be boiled. If there is any albumen, the black under surface renders the white precipitate evident.

Urine may also be tested cold with nitric acid with the same apparatus. A drop or two of the urine should be placed slightly on one side of the centre of the surface of the glass, and a drop of the of nitric acid on the other. By inclining the glass, the two will mix, and after the fumes which results from the mixture have passed away, it will be readily seen if there is any albumen precipitated.

In the first experiment care must be taken not to boil the urine too rapidly, or it will be evaporated. In the second, the resulting precipitate is rendered more apparent if the under surface of the glass has been previously coated with Brunswick black or some other dark substance. A few of these covers can be carried in an ordinary packed dressing-case, and afford a ready means of testing urine at the patient's house.—*Med. and Sur. Reporter.*

The Magnet in Cases of Broken Needles.

A son of Sir B. Brodie broke a needle in his calf. The magnet was employed, and it was easy to show its position. It did not make any change of position. It being resolved not to disturb it, the lad ran about, and in time the needle passed to the other leg, its travel being shown by the magnet. At length it came close under the skin, and was extracted. This case being reported, Mr. B. Carter referred to Dr. McKeown's paper on the diagnosis of pieces of iron in the eye of the magnet, and said that in one case the fragment was removed by the power of the magnet. Sir J. Paget had heard of powerful magnets being kept in large foundries for this very purpose; and Mr. Savory said Mr. Smee published a paper on the detection of the presence of needles by the magnet more than thirty years ago. This seems likely, for the practice is really very old. Indeed, at the meeting it was remarked that Fabricius Hildanus alluded to it.—*The Doctor.*

Analysis of Pumpkin Seeds.

Nicolia Kopylow has ascertained that these seeds contain no alkaloid, nor could the presence of a glucoside be establish which, by Dorner and Wolkowitsh, was supposed to exist therein and named by them cucurbitin (1870). The last named authors had found 44.50 fixed oil, 32.75 starch and traces of volatile oil, resin, sugar and coloring matter. Kopylow ascertained the fat to consist of the glycerides of palmitic, myristic and oleic acids, and the fat extracted by ether also to contain free fatty acid.—*American Journal of Pharmacy.*

Iodide of Starch as an Antidote.

Dr. Bellini, Professor of Toxicology at the Royal Institute at Florence, recommends iodide of starch as a valuable antidote in poisoning by alkaline and earthy sulphides, caustic alkalies and ammonia, and the vegetable alkalies. In poisoning by alkalies or earthy sulphides, he thinks it preferable to all other antidotes; in poisoning by caustic alkalies, it is applicable when acid drinks are not at hand.—*New Remedies.*

Tincture of Aconite Root to Stop the Toothache.

Dr. Stevens, in the *Progrès Dentaire*, advises the use of the tinct. aconit. rad. in inflammations of the gums. In case an alveolar abscess is imminent, dry the gum with cotton and apply a drop of the tinct. of aconite. After the extraction of a tooth, one or two drops applied on a tampon of cotton produces an immediate relief from pain.—*Canada Medical (Clinic).*

Instantaneous Sinapism.

Dr. Rigabert describes a sinapism invented by M. Vincent, a chemist at Saintes, which, he says, for promptitude and certainty surpasses Rigollot's papers. These last are apt to deteriorate by keeping, and at all events require the aid of water to produce their effects. M. Vincent's procedure is as follows: Into a tube, open at the end, five centimetres in length, and having a calibre of half a centimetre, he pours a certain quantity of freshly prepared essence of mustard; the tube is corked and hermetically closed, and is wrapped up in a piece of paper of torerable consistence of the size of one of Rigollot's sinapisms. When it has to be used, some drops of the essence are poured on the paper, which is applied as an ordinary sinapism. The effect is instantaneous and certain; and by pouring on the paper the contents of two tubes at the same time, vesication can be produced.—*Bull. de Therap.*

A New Method of Using Sponge Tents in Dilating the Cervix Uteri.

Dr. T. H. Seyfert (*Medical Times, July* 8. 1876) gives the following method of obtaining the benefits of compressed sponge while avoiding its dangers. The apparatus consists of a small metallic or rubber tube, holding on its perforated extremity a sponge tent, which is completely enveloped by a close-fitting, thin piece of India rubber. The rubber, while permitting the sponge to dilate to its fullest extent, prevents it from absorbing fluids from the canal and protects the cervical mucous membrane from abrasions. Water reaches the sponge through the tube which has upon its vaginal extremity a distensible rubber ball for its reservoir. Instead of limiting the tent it may be made to envelope the entire apparatus, thus keeping the tube in constant contact with the water, which by entering the perforations made in the tube readily finds its way to the sponge.—*Detroit Review.*

Treatment of Pruritus by the Smoke of Juniper Leaves.

Dr. Boeck, of Christiana, reports the results of this remedy in several cutaneous affections, in which itching forms a most distressing symptom, especially urticaria, pruritus and prurigo. The patient is enclosed as for an ordinary mineral vapor bath, and beneath him, with proper precautions againts the blaze which may ensue, is placed a pan of live coals, upon which the juniper leaves have been thrown. If not freshly picked, the leaves should be damped with water. The patient is to remain exposed to the vapor for twenty or thirty minutes, generally on every second day. In prurigo, the remedy is immediately effective, and many cases have, after treatment in hospital by this means, been discharged cured. The most marked effects were obtained in bad cases of chronic urticaria and pruritus.—*New Remedies.*

Lime Water in Infantile Eczema.

A writer in the *Bulletin de Therapeutique* recommends lime water in eczema of the head and impetigo of the face in children, especially in chronic cases, which have resisted other treatment, and states that a marked improvement is noticeable after using it for eight days. It is to be taken in quantities varying up to half a pint, according to the age of the patient, and to dust the part with carbonate of magnesia; but the latter is only necessary when the secretion is very irritant.—*Med. and Surg. Rep.*

Remedy for Dandruff.

The "American Journal of Pharmacy" says: A French physician recommends to apply a solution of chloral hydrate containing 5 per cent. of the latter, by rubbing from one-half to one ounce into the scalp by means of a sponge, and repeating it every morning. A slight burning sensation and reddening of the scalp occurs, disappearing after two minutes. If the hair has fallen off in consequence of the dandruff, it will be renewed in about a month.

Quinine Injections in Sunstroke.

The experience of last year in India, and of this summer in this country, speaks strongly for the value of hypodermic injection of quinine in sunstroke. Five to ten grains may be thrown under the skin, of course using the cold douche, etc.

Oil of Eggs for Sore Nipples, Chaps, Etc.

Heat yolk of egg until it becames thoroughly dry; press it, and digest in boiling alcohol; filter while hot, and distil off the spirit.—*New Rem.*

The editor of the *Medical and Surgical Reporter.* says "that a physician who had received a vaccine crust, wrote that he had vaccinated fifty children with it, and not one had taken. Another became even abusive, because the quills sent him *had nothing in them.* A third stated he had soaked the quills in boiling water, and yet, when he had used them, he did not produce a vesicle. A fourth, that he had used one quill on twenty arms—*all failures.*

A New Adhesive Plaster.

A Brussels medical journal says that a mixture of twenty parts of mucilage and one part of glycerine constitutes an excellent shining and supple plaster, far cheaper than the resin and diachylon, and lasting more than a year without deterioration. Three or four layers of the mixture require to be spread over each other on the linen or other stuff, allowing sufficient intervals for the successive layers to dry.

To Keep Steel From Rusting.

Dissolve ¼ oz. of camphor in 1 gill of cold-drawn linseed oil; by adding to or diminishing the quantity of oil, it may be made to any consistency desired; apply this with a soft rag.

A PHYSICIAN, in the Isle of Wight, has found the homing pigeon to be of great service to him in his country practice. At every village through which he passes, and when his last patient therein is seen, he writes a list of prescriptions for that village, affixes it to the leg of a homing pigeon, and dispatches it to his house. Says the physician in a letter to a contry paper: "By this means, either a country carrier is intercepted starting homeward from our market town, and the medicine is delivered by him on that very evening, or my chemist is enabled, hour by hour, to see his work ahead of him, and forestall his dispensing necessities."—*American Medical Weekly.*

A Chicago coroner relates a case in which a boy, employed as a clerk in a retail drug store of that city, stated to a jury that it was not necessary to weigh morphine for the retail sale, and that he could tell by his eyesight "how much he could sell for five cents."

Madame Hutin's Cologne.

The Philadelphia *Reporter* says that this fragrant lotion, which is still popular, was first used by Madame Hutin (afterward Madame Labasse) about 1830. She was a celebrated French dancer on the stage in New York.

℞ Oil of lavender	3 vj.
Oil of lemon	3 vj.
Oil of rosemary	3 ij.
Oil of cinnamon	gtt. xx.
Alcohol	Ovj.

This, although very weak, was doubtless refreshing when used, as it probably was freely, to wash with after severe exertion.

A well-informed perfumer says that it would answer the original design of cologne water, namely, as an application for the relief of headache, or for the use of the sick room, where the ordinary sweet colognes are only deleterious. He says that oils of lavender and rosemary are always refreshing, while the sweet perfumes are often sickening to a weak person.

Javille Water.

Several years ago we published the formula of this useful preparation for removing grease spots, etc.. but at the request of a correspondent we reproduce it:—

Bleaching powder	1 oz.
Carbonate of potassa	1 oz.
Water	33 oz.

Triturate the bleaching powder in the cold with 25 oz. of water, then add the carbonate of potassa, previously dissolved in the rest of the water, shake well, and let it settle. The supernatant liquor is filtered if necessary, and mixed with 1 oz. of muriatic acid, when it is ready for use.—*Boston Jour. of Chemistry.*

Arsenical Paste.

This is used for preserving the skins of birds, etc., and is thus prepared:—

Carbonate of potash	12 ounces.
White arsenic	4 "
Curd soap	4 "
Slaked lime	4 "
Powdered camphor	¾ ounce.
Water	sufficient to form a paste.

Solubilities of Certain Salts.

The following list gives approximately the number of grains of the salts mentioned, that can be readily dissolved in one ounce of water at the ordinary temperature. If this limit is much exceeded, a clear solution cannot be expected:

Potassium Iodide	500
Ammonium Bromide	300
Potassium Bromide	240
" Bicarbonate	120
" Nitrate	100
Sodium Borate	40
Potassium Chlorate	30
Mercury Bichloride	20

It should be remembered that the bulk of the solution exceeds that of solvent; thus an ounce of water and an ounce of potassium iodide make about an ounce and a half of solution.—*Baltimore Physician and Surgeon.*

EDITORIAL.

Our readers will observe that we begin the New Year with a new series of the Journal of Materia Medica so enlarged as to give them at least fifty per cent. more reading matter, which we believe will be appreciated by them. We have been induced to do this by the numerous complimentary letters concerning the valuable information given monthly, while we have to exclude much equally interesting matter for want of space. Our endeavor is to present such matter as is of service in the daily and diversified practice of physicians.

Elixir Iodo-Bromide of Calcium Comp., in a Case of Lupus.

[We republish, by request of several correspondents, a letter to DR. PAINE, of New York, in regard to the treatment of a case of Lupus at St. Elizabeth's Hospital.]

Letter from Mr. TILDEN to Dr. PAINE, concerning a case of Lupus, and other cases.—Dear Sir—I have your esteemed favor of the 22d, and am pleased to learn the favorable progress of the Scrofulous, Cancerous and other cases under the use of the Elixir Iodo-Bromide Calcium Comp., and hope they will make the same progress to a practical cure as in the case of Mrs. Augustine, which certainly exceeds any that has come under my observation. It not unfrequently occurs that a valuable remedy obtains a prejudice by claiming for it too diversified medical powers; in this, we believe, we have thoroughly tested its value in scrofula, scrofulous sores and abscesses, and that class of chronic cases of a scrofulous diathesis which the usual remedies so often fail to reach, as well as to combat those pathological conditions on which a large number of cutaneous affections depends.

We have, also, well attested evidence concerning its action upon the lymphatic glandular system, causing a reduction or absorption of glandular and other tumors. In cancerous cases, *while no remedy can, with propriety, be recommended as certain to produce a cure*, we may properly reason that very many cases are so intimately associated with a scrofulous condition of the system, or that morbid condition of the system amenable only to alterative treatment, that it at least will be found serviceable in mitigating the severity of the disease, with a hope that its uninterrupted use, for a length of time, may result, in very many cases, in permanent relief, as it has been in the case of Mrs. Augustine.

A physician, writing us some time since, suggests its use as a prophylactic in certain cases, and remarks: "As cancerous affections, like scrofula, are mostly hereditary, and develope usually in persons of advanced age, and appearing in females usually after the cessation of the catamenia, it should be used by them early to destroy the germs of the disease which may exist in the system, better than to combat it after it has developed. As most females, at this period of life, are affected with some disease or another, why would it not be of great benefit, at this period, as an alterative to ward off their usual troubles?" Please try this. The suggestion of the doctor is good.

These cancerous cases are extremely difficult to treat, and care should be observed that the stomach retains kindly the remedy; therefore begin with half teaspoonful doses, diluted in a wine glass of water, given three times a day, an hour before each meal, and increase gradually to two teaspoonfuls three times a day, or more in some cases. In cases of open sores or ulcers, where there is great fœtor, use Bromo-Chloralum, diluted one part to ten of water, to remove the odor and cleanse the parts; then apply the Solution Iodo, diluted one part to eight or ten of water, according to the sensitiveness of the parts. If the solution is not at hand, dilute the Elixir, about one part to four of water, and apply, taking care to use the Bromo-Chloralum to remove all offensive secretions, for to the extent that these are chemically changed into healthy secretions by the action of Bromo-Chloralum, according to Dr. Baker, do we relieve the system from the contamination of the circulating fluids by its absorption. Particular attention should also be given to the diet, which should be wholesome and nutritious, easily digestible, avoiding pork and indigestible meats. When it is necessary to use iron, as in an anæmic condition, and, at the same time, unite a sedative with it, use the Ferrated Wine of Wild Cherry, or you can give the Iodoform and Iron Pills, or Syrup Iodide of Iron, thus uniting the alterative with the tonic, and also use bitters and tonics as indicated. Particular attention should be especially directed to the secretions and evacuations. The bowels should be kept freely open with deobstruent laxatives or with alterative, saline aperients. These general suggestions I have always given as to treatment of cases, and in all cases with good results.

I enclose you copy of an article in the *American Journal of Medical Sciences*, of Philadelphia, by Dr. Guptill, of Elliot, Maine, giving successful treatment of a case of Exophthalmic Goitre, with the Iodo-Bromide of Calcium Comp.; and have, also, a letter concerning its giving relief in a case of enlarged liver, given up as incurable. I will give you these cases as reported to me, as they will be of service to you in the diversified cases sent to the Hospital.

[CONTINUED IN NEXT NUMBER.]

Scrofula.

BALTIMORE, Md., Jan. 12, 1877.

MESSRS. TILDEN & Co.:

Gentlemen—I beg leave to present to you the following striking case of the efficacy of the Iodo-Bromide Calcium Comp.:

In April of last year I was called to see Louis Smith, aged twelve years, who was afflicted with Scrofula. He had been under medical treatment several months prior to my visiting him, from which he derived little or no benefit.

I ascertained that he had been suffering from painful swelling in the hip and thigh, terminating in abscesses, which had been frequently opened. These conditions had continued for a period of two years or more. When I first saw him he was confined to his bed and unable to walk. He had but little appetite and was greatly emaciated. I ordered the Elixir Iodo in doses of half a teaspoonful, gradually increased to a teaspoonful three or four times daily. He had taken the medicine about four weeks, when to my satisfaction he exhibited decided improvement; his appetite was restored and he was able to walk about the room. The discharge, which had been profuse, was greatly diminished. The

treatment was continued for a period of about five months, at the termination of which he was restored to perfect health. Very respectfully,

W. T. Jones, M. D.,
81 N. Calvert st.

Extract from letter of W. Livingston, M. D., Freeport, Ill., Dec. 11, 1876:

"I am using your Iodo-Bromo Calcium Comp. constantly in my practice, and with the best results in scrofulous cases. I have also found it very useful, properly diluted, as a vaginal injection."

Sore Foot.

Extract from letter of Amos S. Smith, M. D., Bismarck, Lebanon Co., Pa., Dec. 4, 1876: "Your medical preparations cannot be excelled. They do all you ask for them and more. I have used your Elixir Iodo-Bromide Calcium Comp. internally, with the Bromo Chloralum externally, for a very sore foot on a woman nearly eighty years of age, with caries of the metatarsal bone of the big toe. She was entirely cured by the above named preparations. I could name other cases, where the use of the same agents, has proved in the highest degree efficient."

Firwein in Phthisis Pulmonalis.

BY X. T. BATES, M. D.

Miss C., aged 20, had consulted me more or less for some two years, for a cough and pain in left side, which finally developed into Phthisis, unmistakable to a casual observer. I early diagnosed the case such, and treated her with Cod Liver Oil and Phosphate Iron, but with little or no good results, save perhaps that of partially arresting the progress of the disease and preventing to a certain extent waste of time.

At the time I prescribed Firwein my patient was much reduced in strength—nutrition impaired—voice feeble and hoarse—breath deficient, even to preclude an amount of active exercise and labor, for which muscular strength was adequate; a condition of things amounting to almost complete destruction of the left lung. The right also showed indications of disease, and I could discern a gloomy prospect only, that of early death.

I prescribed Cod Liver Oil and Firwein—dissolving in the latter Pyro. Iron grs. i. to gr. ii., and ordering a teaspoonful to be given four times a day. This treatment was continued to the exclusion of all other medicines. Convalescence was soon apparent, which has been uninterrupted to the present time. Patient now able to resume her vocation as a seamstress. The left lung is still impaired, the right is entirely reconstructed.

Jan. 12, 1877.—A year or more has elapsed since I called your attention to Miss C. During the interim she has occasionally taken the Firwein. She is now in the enjoyment of better health. Her entire system seems to have undergone reconstruction. The anæmia has largely disappeared; strength improved; difficulty of respiration greatly lessened; is now serving as a domestic in a family where her labors are light.

Case Second.—Late in the summer of 1876 I was called upon to see Mr. D., who for several months had been on the decline. Of English extraction; occupation, farmer; aged 36 years; dark complexion; had been a man of great endurance, almost an entire stranger to any prostrating sickness.

It appears that several months previous to my visit he contracted a cold, which was attended with intractable sequances, a cough and expectoration. These were soon followed by pain in the chest, impaired muscular strength, pallid countenance, loss of appetite and very great emaciation.

Medical advice was early brought into requisition, though, notwithstanding a speedy cure was promised, these symptoms continued to assume a graver form until he was obliged to abandon his work. During the summer season he was able to endure scarcely more physical exercise than that incident to a short walk. His dissolution seemed near at hand—earthly agencies futile to even stay the progress of the disease.

Such the history and condition of my patient at the time of my first visit. An examination revealed a frequent pulse, impaired nutrition, much prostration and rapid destruction of the left pulmonary lobe. I resorted to measures both reparative and sustaining. Advised the most nutritious diet and the following

℞ Firwein ..... ℥ viii.
Pyro. Phos. Iron..... ʒ iv.

Take one teaspoonful four times a day. This treatment has been continued unchanged. Opium, Quinia and Pot. Bromide have occasionally been prescribed, but continued only so long as necessary to accomplish a specific object.

The result has been most gratifying. The cough and expectoration gradually gave way, the pain soon yielded, the pallor became supplanted, the appetite revived, nutrition visibly improved, as indicated by progressive increase of weight and strength. Complete absence of resonance and suppressed respiratory murmur over the left lung show the destruction which has been arrested.

The disease, if not permanently removed, has at least been rendered passive, and under the influence of the Firwein become non-progressive.

Firwein in Diabetes Mellitus.

In the previous number of the *Journal* we referred to the use of Firwein in Diabetes. Several other cases have since come under our observation which have been greatly relieved by its persistent use. One case of a gentleman, a banker, residing in Indiana, we desire to mention particularly, as we were supplied with the urine weekly, and tested the same by Fehling's test, which showed gradual and decided change in the per centage of sugar, decreasing from *eleven per cent. plus to less than four per cent.*

Having reason to believe that this gentleman's system was affected with Scrofula, we suggested the use of the Elixir Iodo-Bromide Calcium Comp., as an alterative, and with decided improvement, as will be observed from the following note, received May 24, 1876:

"I have taken the 'Elixir Iodo' once or twice daily, 'Firwein' three or four times a day, and have to say that I must certainly be improving; my strength is better, my appetite is now good, and the distressing symptoms of thirst very much abated, and the quantity of urine is lessened."

I had the pleasure of an interview with this gentleman in July, and learned that the distressing thirst which had so long afflicted him had nearly abated. In a letter afterwards he remarks: "I am feeling quite well, and ascribe it generally to the remedies you have recommended to me, and am greatly encouraged."

He writes Sept. 17th, 1876: "Since I wrote you last, I have been improving in health, and now, thanks to you. I ascribe my improvement to the persistent use of 'Firwein' and 'Elixir Iodo-Bromide of Calcium Compound.' I think I can safely say that the quality of urine discharged is almost, or quite down to normal amount for men of my age, and the desire for water or liquids is very greatly relieved. I am feeling so well that I intend making a trip to the mountains in Colorado, on a hunting expedition, this fall."

This case shows only an appreciable quantity of sugar.

Jan. 9th, 1877, he writes: "I am greatly improved. Urine less in quantity; quite normal; quality better. I owe my improvement and present good health and strength to the use of 'Firwein.' I have also seen good results from its use in cases of Bronchitis. My daughter used it and improved greatly."

Firwein in Follicular Pharyngo-Laryngitis.

SENATOBIA, Tate Co., Miss., Jan. 20, 1877.

Messrs. TILDEN & Co.:

Dear Sir—I desire you to send me one-half dozen one pound bottles of Firwein. I sent to you some time ago and you sent me two bottles (of Firwein). I have taken one and a half for Follicular Pharyngo-Laryngitis, and it has almost relieved me. I have been suffering with it for two or three months, and had taken all the usual remedies with no avail or cure whatever. I was suffering with Intermittent Fever, which produced the above disease, and that is giving away since I commenced the use of your valuable medicine—Firwein. I think it the best remedy I have met with for any disease of the respiratory apparatus, and also a valuable tonic. Respectfully yours, etc.,

J. M. WILLIAMS, M. D.

Dr. JAMES M. ARMSTRONG, of Sarcoxie, Jasper Co., Mo., says, under date of Dec. 1, 1876:

"I have two cases of obstinate catarrh under treatment which have resisted the ordinary course of treatment. Being impressed by the concurrent testimony of the virtues of Firwein, I have been induced to give it a trial and find that it is acting like a charm."

FIRWEIN—Dr. BUCKLAND, Texas.—Firwein can have no superior in Bronchitis. Four cases have yielded in my hands.

Dr. BALDWIN, Maine.—A case of Bronchitis of several years standing has so far recovered that my patient has given up his usual winter visit South.

Dr. WETTON, of Chicago, writes: I read the letter of Dr. Nissley you were so kind to send me, as to loss of voice, desiring to test it in a worse case than his, and am happy to say my patient is improving and believes he will recover. He has only been able to whisper for months.

Dr. LINDSAY, Pennsylvania.—I congratulate you on the Firwein combination. It works to a charm in all throat and lung difficulties. The earlier it is used the better.

Asthma—Goitre.

MASON CITY, Iowa, Jan. 9, 1877.

TILDEN & Co.:

Dear Sir—I have neglected from time to time to state that I have been using your medicines, viz.: Iodo-Bromide of Calcium Comp., Bromo-Chloralum and Firwein; all with great success. The Firwein with marked success in several cases of old and long standing asthma, which are entirely cured. Also the Iodo-Bromide of Calcium Comp., with good results in old ulcers and scrofula, and quite a number of instances in the producing of absorbtion of large Goitre. I have used the Bromo-Chloralum with good results in all cases of sore throat, as well as a wash in all derangements of the mucous membrane. It may be of some service to you for me to say that I have used your preparations for about 15 years, and find them all that they are represented to be.

Yours respectfully,

W. W. ALLEN, M. D.

Scarlet Fever and its Treatment.

BY M. R. CHADWICK, M. D., HART, MICH., JAN. 12, 1877.

During a severe visitation of scarlet fever in this vicinity last winter we met with several cases of the malignant type, most of them proving fatal in from twenty-four to forty-eight hours, despite our best directed efforts. Dr. McPherson, of this place, had charge of most of the cases; indeed we were all almost at a loss as to what course to pursue. Dr. McPherson was called to see Master S., a bright little fellow about five years old, of sanguine, nervous temperament. He immediately sent for me in consultation. After a hasty consultation we concluded to put the patient in the hot bath, apply ammonia freely to the spine, give belladonna until the pupils dilated, following it and in connection with it quinine and chlorate of potash until the eruption appeared; first livid, but finally presented the florid color characteristic of the anginose variety. The patient went on then towards recovery without any untoward symptoms. Although this is the only case in which we have had the opportunity of testing the treatment, I thought it of sufficient importance to have it recorded for the benefit of the profession, inasmuch as it is so rarely that such cases recover.

Erratum. On page 367 of Journal, 1876, December issue, the name of I. M. Brannock, M. D., is incorrectly printed I. M. Brannoer. We hasten to make this correction, in justice to an esteemed correspondent.

THE
JOURNAL OF MATERIA MEDICA,
A Monthly Journal Devoted to
MATERIA MEDICA, PHARMACY, CHEMISTRY, AND NEW REMEDIES.

New Series.] FEBRUARY & MARCH, 1877. [Vol. XVI.—Nos. 2 & 3

Atomizer and Volatilizer.

By Henry M. Wells, *Surgeon*, and E. S. Duluce, *Chief Engineer, United States Navy.*

For Disinfecting and Deodorizing Ships and their Cargoes; Hospitals, Insane Asylums, Public Buildings, Tenement Houses, Hospital Clothing and Bedding, Street Cars, &c.

TO BE USED WITH STEAM OR COMPRESSED AIR.

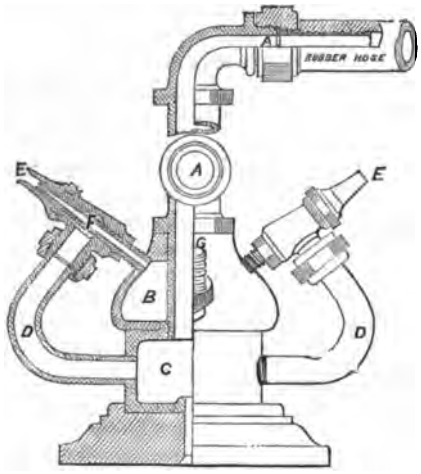
The invention relates to that class of disinfecting apparatus, in which steam or compressed air is employed as a medium for the conveyance and distribution of any deodorizing or disinfecting liquid; and it consists of an apparatus in which the steam or compressed air supply-pipe passes centrally through the chamber containing the disinfectant, into a steam-chest placed immediately under said chamber, by which means the heat, radiating inward from the central supply-pipe and the base of the chamber containing the disinfectant, vaporizes the same and causes it to ascend into jets; where it is met and surrounded by the steam, which atomizes and projects it into the apartment to be fumigated, in the form of fine spray or vapor.

B is the chamber which is partially filled from a reservoir, through a small hose attached to the coupling G, with Bromo-Chloralum, or any other suitable liquor disinfectant; and A the steam supply-pipe which passes centrally through said chamber and communicates with the steam-chest C, underneath; D D, are steam pipes which are used to conduct the steam into the jets E E, when it meets the escaping disinfecting liquid or vapor, which ascends from the chamber B, assisted by a partial vacuum formed by the passage of the steam, completely enveloping the inner pipe of the jets, depending upon the flow from the reservoir, which is regulated by a stop-cock, and atomizes it and projects it into the room or closed space, desired to be operated upon, in the form of a fine spray or vapor, which rapidly mingles with and saturates the atmosphere thoroughly, penetrating the smallest crevices in walls, ceilings, &c.

When steam is objectionable or cannot be had, compressed air may be used. A continuous stream of the disinfectant can be supplied to the chamber B from the reservoir, regulating the quantity by the stop-cock and delivering it at the mouth of the jets E E divided spray; compressed air may be obtained in sufficient force from an ordinary force pump as is used for water.

The nozzles E E may be removed, when de-

sired, to clean the jet of any obstruction caused by deposition of any matter therein.



EXTRACT FROM THE JUDGE'S REPORT IN DEPARTMENT IV., GROUP 2 AT THE 41ST., EXHIBITION OF THE AMERICAN INSTITUTE, held in the City of New York, October, 1872.

No. 265. Apparatus for vaporizing and atomizing disinfectants.

"They take pleasure in declaring it as the most efficient apparatus known to them for the purposes intended. To diffuse disinfectants or deodorizers in the form of a fine spray or mist in the atmosphere to be purified, strikes them as a very happy idea and they doubt not that wherever used, this method will materially aid in preventing the spread of diseases of the zymotic class, provided it be fed with the proper fluid. We recommend it for the medal of special award."

A true copy of the report on file.

JOHN W. CHAMBERS, Sec'y.

Cactus Grandiflorus (Night-Blooming Cereus).

[A short extract from the manuscript of the new Materia Medica, now in press, written by Prof. I. J. M. Goss, A. M., M. D., Marietta, Ga., to be published by subscription.]

The Cactus Grandiflorus has cylindrical stems, rooting and very long, with five or six slightly prominent ribs, armed with small spines, disposed in radicated forms. The fruit is egg-shaped, covered with scaly tubercles, rather fleshy, of an orange or red color, filled with small seeds of an acid taste. The flowers are very beautiful, having a sweet odor, which is that of benzoic acid and vanilla. It is cultivated now as an ornamental plant by amateurs and florists.

Medical Effects and Uses.—This article has a direct affinity for the heart. Its effects seem to be exerted upon the ganglia of that organ directly. In hyperæsthesia, irratibility, neuralgia, spasms, irregular action, and even in inflammation of the heart, it seems to exert a curative impression. It differs from digitalis in this, whereas it seems to act on the circular fibres of the muscular structure of that organ, while digitalis acts upon all the muscular fibres of it alike. It resembles aconite in its action more than digitalis. In organic or sympathetic palpitation of the heart, I have found cactus to act more promptly than any other remedy I have ever used, especially where the heart action was tumultuous and the pulse hard. And again, in structural diseases of the heart, accompanied with a sensation as if the heart was constricted or bound with a cord, cactus will give relief. If the valves are diseased, cactus can only give temporary relief. Here I alternate it with collinsonia. In hypertrophy, with enlargement, I have found cactus to act better than any remedy I have tried. In angina pectoris it is very prompt in its effects, generally giving relief in a short time.

In acute inflammation of the heart from rheumatisum, cactus may be alternated with colchicum or salicin, or such other remedies as may be indicated. In those cases of carditis, with oppression of breathing, blueness of the face, dry hacking cough, quick pulse, throbbing, tense and hard, cactus gives great relief. In those cases of chronic inflammation of the heart, attended with suffocating respiration, œdema of the face, with dull pain at the heart, coldness of the extremities, intermittent pulse, and in some cases, general dropsy, cactus will be found to aid the other proper means indicated in such condition. In cases of enlargement of the ventricles, indicated by irregularity of the heart's action, sometimes great frequency of action, then intermittent action, alternating with unusual slowness of action, cactus may be prescribed with confidence. In cases of vertigo from congestion of brain, or of heavy tensive pain in the vertex, or pulsative pain in the temporal region, dimness of sight, the cactus is directly indicated, and will give good results. There are cases of rheumatic inflammation of the diaphragm, attended with constrictive pains in the lower part of the chest, reported cured by cactus. This however, needs further confirmation to establish the curative influence of this remedy over other muscular structures besides those of the heart. The saturated or mother tincture, and the fluid extract are the only reliable preparations of the cactus; and these should be

made from the fresh stems and flowers, equal parts, 8 ℥ to Alcohol 2 pints. Dose of the saturted tincture, 5 to 10 drops.

Dose of the fluid extract 3 to 5 drops every two or three hours.

Phosphorus—Its use in Medicine.

Phosphorus has for several years been growing in favor, and is now in greater demand than ever. We have ascertained that the quantity consumed during the last few months is enormous. The quantity converted into pharmaceutical preparations, considering that one grain makes thirty doses, is astonishing for a drug which has several times been brought forward and fallen into disuse, and seems to indicate that at length it has established a claim to a permanent position in the Pharmacopœia if the compilers of that volume can furnish us with reliable formulæ, for the present officinal pill should never be trusted. We may add an expression of our belief that the extensive use of phosphorus in recent times is greatly due to the fact that safe and efficient preparations are now accessible to the profession; though, unfortunately, there is some danger lest the commercial spirit of competition should distribute no small proportion of low-priced preparations, for it will be seen that skilled labour is absolutely required to secure efficiency and safety; so that, in the case of phosphorus, mere cheapness ought not to decide the selection. What, then, is the remedial value of phosphorus, the circumstances which may lead us to prescribe it, and the forms in which it is best employed?

PHOSPHORUS AS A POISON.

It used to be considered a simple stimulus to nervous action, with some special (though, perhaps, doubtful)tendency to affect certain portions of the nervous system. Naturally, however, the toxic qualities of so powerful a poison attract the first attention; and inasmuch as these have been recently confounded with its therapeutical effects by Dr. Broadbent, we will first of all refer to them.

Necrosis of the jaw is well known to attack a considerable proportion of those engaged in manufactures where they are exposed to the fumes of phosphorus. This, however, must be regarded as a merely local effect. It was long known that those who had decayed teeth were most likely to suffer from necrosis of the jaw, and Wegner's experiments on rabbits show that when the teeth were perfectly sound no necrosis was produced by exposure to phosphorus fumes, while if any bone were exposed to such fumes, through a wound, necrosis invariably took place, but the disease could not be produced by administering the drug through the stomach, even though the bones were laid bare. These facts have an important bearing on the medical use of phosphorus, and will dispel the hesitation some have felt in prescribing it.

Leaving, then, the matchmakers' disease, we have to consider the effects of poisonous doses. They may be summed up as profound alteration of the viscera, tissues, and blood, combined with some of the effects of ordinary corrosive poisoning. The erosive gastritis often referred to in books is by no means constant. There is, however, generally considerable gastro-enteritis attributed by some to the action of phosphoric acid. This explanation is doubtful, inasmuch as the same condition is observable when the drug is introduced directly into the blood. The duodenum suffers a good deal, whence the irritation is propagated along the bile duct. To this circumstance some attribute the jaundice which generally occurs; but others believe this to be due to the effect on the liver, and others, again, consider it as hæmic in origin. It is certain that the liver suffers much. In fact, it is difficult to distinguish acute yellow atrophy of this organ from the effects of phosphorus poisoning. In acute poisoning the greatly enlarged liver is remarkable, but in protracted cases the organ becames atrophied, and it is impossible to distinguish it from the effects of disease. The other viscera are affected—especially the kidneys—with a kind of fatty degeneration, which process extends to probably all the tissues, since Wegner has shown it to involve the minute arterioles. The blood, too, is deteriorated, rapid destruction of the red globules taking place, and the reactions of the fibrinogen and the fibrino-plastic substance being hindered. We have thus set up ecchymoses and hæmorrhages of a changed blood which has lost its power of coagulation. So universal is this that ecchymoses appear on all parts of the body, and hæmorrhages occur from all the mucous membranes. In fact, we have a kind of hæmorrhagic diathesis set up, combined with the general fatty degenerations, which in protracted cases extend to the involuntary muscular system. Of course, the extent of those changes is greatly influenced by the amount of the poison taken, but we may remark that although the monstrous proposition was made at the Clinical Society that a sort of degeneration of enlarged spleen might be produced by the agent, such a result could only be expected in quantities sufficient to affect similarly all the other viscera—in a word, to poison the patient.

The symptoms set up may be conjectured from what has preceded. In from three to twelve hours intense depression is followed by nausea, vomiting, and abdominal pain—not so severe as in corrosive poisoning. The vomited matters often smell strongly of phosphorus, and are luminous in the dark, as are also sometimes the fæces and other secretions. There is generally fever. Jaundice appears in from thirty six hours to four or five days, according to Tüngel, Lebert, Wyss and others. Albumen is found in the urine and sugar has been detected. The bile acids also appear, and the biliary coloring-matter as soon as jaundice sets in; also leucin and tyrosin, and (more important still) sarcolactic acid. On these points, Munk and Leyden, as well as Lewin, Kohts, Virchow, Ossikovsky, and others previously cited agree, notwithstanding some doubts that have been thrown upon them. Albuminuria, however, is not often found in animals. even though the kidneys may be greatly damaged; and cases do occur in which the symptoms differ considerably. One is mentioned by Zeidler, in which suppression of urine took place, and death in a few hours. Mayer says that where very large doses have been taken both the urine and the blood may be phosphorescent. Casper says that generally delirium, paralysis, coma, and convulsions occur, but the nervous system often gives no special signs.

ANTIDOTES—TREATMENT OF PHOSPHORUS POISONING.

The treatment of cases of phosphorus-poisoning is not very satisfactory. The stomach should be thoroughly evacuated. The best emetic appears to be sulphate of copper, inasmuch as Eulenberg, Guttmann, and Bamberger have shown that phosphorus quickly combines with the copper to form the less active phosphides. The minute particles of phosphorus adhere very closely to the mucous membrane, and can only be dislodged by chemical means. Hydrated magnesia, lime-water, liquor chlori, and chloride of lime have been recommended as oxidizers, but their action is too slow be of any use. Turpentine appears to be the best antidote. It unites with the phosphorus to form a spermaceti-like, crystalline mass, which is soluble in ether, alcohol, and alkaline solutions, and can be eliminated unchanged by the kidneys, without injuring them. Perhaps it also promotes the oxidation of a portion. Our late lamented fellow-worker (Dr. Letheby) was the first to observe that the vapor of turpentine prevented the action of the phosphorus fumes on the artizans exposed to them. MM. Andant and Personne soon afterwards published cases showing the power of turpentine to arrest phosphorus-poisoning, and numerous cases have since been recorded showing its value. Some have been referred to in the past volumes of The Doctor.

It seems that the common commercial turpentine is the most effective, probably because it is richest in ozone from having been exposed to the air. Turpentine appears also to prevent fatty degeneration of the tissues. To repair the damage to the blood Jurgensen has employed with success transfusion, and Dr. Roussel's improved apparatus makes this operation more available than before. Schouschard and Dybkowsky attribute the poisonous effects of phosphorus to its depriving the tissues of oxygen by being converted into phosphureted hydrogen, and this into phosphoric acid at the expense of the blood, and then the tissues it feeds. The readiness with which phosphorus combines with all fatty matters renders it imperative that animal fats should be wholly excluded from the food of patients recovering from poisoning by solid phosphorus.

PHOSPHORUS AS A REMEDY.

We are now prepared to consider the action of remedial doses of this powerful agent. As already stated, it has for a long time been considered as a special nervine stimulant, and was supposed to possess aphrodisiac properties. The general impression now is, that these last have been greatly exaggerated, although in poisonous doses priapism is not an uncommon system. At present it is looked upon rather as a nutrient to the nervous tissue than as a mere stimulant. We know that this metalloid is present in most of the tissues, but chiefly in the nerve centres. Hence it has been thought that it is essential to these textures as iron is to the blood, and chemical observation seems to justify our regarding it in some sense as a nerve food. Cases in which such an agent seems *à priori* to be needed are those in which the remedy is most effectual, and a large number of cases in which the phosphates appear to be eliminated in excess are also benefited by the drug. Though we cannot experimentally prove its action on the nervous system, it seems certain that phosphorus obtains access to the blood in the free state, *provided it be given* in such a way as to permit this; and *only under such conditions* is it of any remedial value. Once in the blood, it has access to all the tissues (including the nervous), and it certainly contributes to the healthy nutrition of several. Wegner's experiments show that, under its influence, the spongy tissue of the bones became thickened. New deposit took place on the inside of the shafts

of long bones; and this to such an extent, that in some cases the medullary cavity was filled up. The effect was more marked in growing than in adult animals. The new tissue is at first gelatinous. If the animal were deprived of lime, the new tissue was formed notwithstanding, but remained soft. No excess of phosphates appeared in the bone, and no such action could be obtained from phosphoric acid unless given in proportional doses, nearly a thousand times larger. Hence Wegner concludes that it acts in its elemental form—not after oxidation. It is an excellent plan clinically to administer it in combination with iron, or to give iron at the same time.—*The Doctor.*

[CONTINUED IN NEXT NUMBER.]

Influence of the Heart in Uterine Affections.

Dr. Theo. H. Jewett, of South Berwick, Me., (*Proceedings Maine Medical Ass'n.*, 1876), being surprised at the non-recognition in the text-books of the intimate relation of the uterus and heart in both functional and organic affections, contributes a paper on the subject. He claims priority, in "the definite recognition of the fact that many of the most intractable affections of the uterus are associated with abnormal nervous or organic conditions of the heart as causative influences, and that the remedies are beneficially operative upon the mal-conditions of the uterus by improving the cardiac action."

"The uterus receives its nerves from the renal and hypogastric plexuses. Those from the first source follow the course of the ovarian arteries, and are distributed to the fundus and superior region of the uterus. Those from the second follow that of the uterine arteries, and present very nearly the same distribution, dividing into superficial and deep-seated branches." *Dubois.*

"The hypogastric plexuses are principally formed by branches of the sympathetic, but they also contain nerves issuing from the sacral plexuses. Thus are explained the numerous sympathetic reactions on the various functions of organic life, and on the brain and spinal cord, which are exhibited in uterine diseases." Thus the connection of the heart also with the uterus, our point in question. The uterus is also supplied by vaso-motor nerves.

The rational symptoms, apparent both in affections of the heart and uterus, clearly show the intimate sympathy of these two organs. It is seen in abnormal cardiac innervation; also in the organic affections. Palpitation in excited or feeble hearts, syncope and syncopal convulsions, intermittent pulse, cold feet and hands, or the opposite, and like states of the head, are often associated with uterine affections as cause and effect.

As to the hysterical form of disordered heart, we need not dwell upon its associations, causes or consequences, as far as the uterus is concerned. All this is too well known for us to consider at length. One thing is sure—the heart if disturbed, is irregular, so that the patient chokes and is nearly suffocated at times. This state adds to the nervous disorder of the uterus, also to that of its vascular system, engorging it and obstructing the return of its venous blood. All this should be met by nervines, tonics and appropriate treatment.

We have not unfrequently another form of disordered innervation of the heart, or that due to debility or loss of vigor of the cardiac nerves themselves. We often notice in these cases very irregular action of the heart, sometimes a thready and intermittent pulse, complicated with a congested uterus and the bad symptoms which usually attend such a condition. The head is at such times severely affected, often delirium, congestion and pain, and the general circulation much embarrassed. A sensation of profound sinking in the region of the heart, attended by much suffering, is a common symptom. Sometimes we have all the apparent symptoms of organic disease of the heart, and for the time being the *effects*, with syncope and often angina pectoris; but when relieved, the heart is perfectly regular as to rhythm and beat, and the most experienced auscultator connot perceive a sign of heart trouble.

This functional mal-innervation of the cardiac nerves and bad action of the heart embarrass the return of the venous blood from the organs of the pelvis and abdomen. The effects are damaging in various directions, to the organs above. We have a stasis of blood in the uterus, with prolonged floodings at menstrual periods, and sometimes, under fright or great excitement, intervals of the periods. Here the cerebro-spinal centres and the sympathetic are associated with the cardiac mal-innervation. Often women are unwell every week, sometimes they flow every fortnight, and sometimes all the time. As a consequence of this tumid state of the uterus, we have cervical granulations; also granulations of the uterine cavity; sometimes polypi, sometimes fibrous tumors and various neoplasms, erosions and ulcerations of the os uteri, prolapsus and leucorrhœa, sometimes, indeed, carcinoma. The erosions return after local treatment. The tumid cervix and uterus are not permanently benefited by leeching or scarification. The tumid, congested state continues, cathartics leave no permanently

satisfactory results; granulations after granulations return, and a fungoid degeneration of the uterine mucous membrane is set up, which neither the curette nor caustics will extinguish. Just as long as the disordered state of the heart continues, just so long is the patient in affliction. Menorrhagia and other results of an over congested uterus continue.

It may, perhaps, be said that we have here an organic disease of the heart present. Such is not always the fact, for many of these patients recover, and the heart then shows no indications of heart trouble. Some of these cases, however, may, if neglected, lapse into organic disease. In the class referred to, we have, Dr. J. believes, simply a peculiar lesion of cardiac innervation *in situ*—an idiopathic nerve lesion of the ganglia lying in its inmost structure. This lesion must be attended to, and not the uterus wholly, or our patient sinks to a low moribund condition, from menorrhagia and other troubles with their reactions upon the system at large, and sometimes the woman loses her life.

In these cases, the best treatment is the use of the bromide of ammonium in doses of from ten to twenty grains thrice daily, as a tonic and anodyne, kept up for weeks, and sometimes for months, following, after a time, by Fowler's solution of arsenic, or alternated therewith.—The iodide of potassium may occasionally be associated with the bromide of ammonium. The latter may be used not only in the interval, but during the menstrual period itself. This treatment quiets and regulates the heart in a most satisfactory manner, and the uterine troubles, as a consequence, vanish. Cannabis indica is of much use in this class of affections, giving the heart balance in action, and thus lessening uterine congestion. Nux vomica is also of service in supplying and reinforcing the sensory and motive power coming from the spinal cord. Terror, which paralyses the heart, and fear, which sinks its energy, and undue anxiety, which depresses, should be avoided; while hope, which enlivens and sustains, and perfect satisfaction as to the feeling, which cheers, should be encouraged and secured as far as lies in our power.

We now come to the organic affections of the heart as bearing upon uterine congestion. Insufficiency of the tricuspid valves, or of the mitral valves with stonosis, with all their targal effects upon the lungs and right heart; also dilatation of the right heart, from whatever causes—all these abnormal cardiac conditions lead to fullness of the portal circulation, and to plethora and a tumid condition of the uterus. The effect is, as it were, almost wholly mechanical, causing a delay of return of the venous blood and engorgement of the uterus and appendages, more particularly where other usual causes co-exist. Indeed, the liver, kidneys and other abdominal organs are also affected, thus complicating the case. Such patients often suffer severely at the menopause with excessive floodings.

The treatment applicable to the heart in these cases, is the rational use of digitalis, to give tone to the debilitated organ and improve its action. In some cases it may be associated with iron, when marked by much anæmia, and with veratum viride in cases characterized by very great irritability. Fowler's solution may follow as a heart tonic. Other organs, as the liver and kidneys, should receive attention.

Such local attention to the uterus as the cases may require, as the removal of polypi and the like, should not be neglected. It may be said that all these remedies now mentioned have again and again been made use of. Such has been the case. Indeed, what has not been blindly prescribed? They have not, however, been employed with any intelligent idea, but simply empirically, as are many other remedies, with perhaps a notion of their action as astringents, which, in the strict sense of the word, they are not.—*Virginia Medical Monthly.*

The Relations Between Pseudo-membranous Croup and Diphtheria, and the Value of Tracheotomy in each.

New York Academy of Medicine, Feb. 1st, 1877.

Dr. Austin Flint opened the discussion upon the above subject with the remark that, probably, its leading object would be to determine whether pseudo-membranous croup and diphtheria were two diseases, distinct from each other, or were essentially one and the same disease. Dr. Flint regarded them as essentially distinct diseases: 1, histologically; 2, clinically. Speaking from a histological stand-point, he was willing to concede that the local process in the two diseases did not involve any essential pathological difference. With that view, the question therefore was to be settled by clinical evidence; and the reasons for regarding them as essentially two distinct diseases were chiefly the following:

Pseudo-membranous croup occurred rarely except as a sporadic disease; it never prevailed epidemically.

Diphtheria prevailed as an epidemic, and was generally admitted to be a disease communicable

by inoculation and by means of infectious miasm.

Pseudo-membranous croup occurred only rarely before two, and almost never after seven years of age.

Diphtheria attacked persons of all ages not infrequently.

Pseudo-membranous croup was a local disease and the fever which attended its progress, was symptomatic—the constitutional symptoms being proportionate to the amount of fever.

Diphtheria was to be regarded as an essential fever, and the local affection was its anatomical characteristic.

The question of the presence or absence of micrococci was purposely passed.

In pseudo-membranous croup death occurred by apnœa.

In diphtheria death occurred by asthenia, often without laryngeal affection.

Pseudo-membranous croup was not accompanied, both with regard to degree and extent, by an exudation within the fauces, perhaps anterior and posterior nares, as occurred in diphtheria. The occurrence of an exudation upon the vulva, perhaps upon the anus, upon excoriated surfaces, etc., did not belong to the history of pseudo-membranous croup.

Enlargement, sometimes suppuration, of the lymphatic glands was peculiar to diphtheria. Hemorrhages did not occur in connection with pseudo-membranous croup, nor did paralyses. Regarded from a clinical stand-point, therefore, it was no more proper to consider a case of pseudo-membranous croup as one of diphtheria than to regard a case of dysentery in which there was a plastic exudation upon the mucous membrane as diphtheria.

The discussion might be brought within narrower limits by considering whether the *laryngitis* of diphtheria differed from that of pseudo-membranous croup; in other words, was the laryngitis the same in both diseases? That question was to be answered only by macroscopical and microscopical observation. To render the investigation yet more laborious, pseudo-membranous croup as a complication of diphtheria was not of infrequent occurrence, nor was the fact of such complication inconsistent with the belief that they were distinct diseases.

With reference to the value of tracheotomy in each, two questions arose:

1. Was tracheotomy of any value in these diseases?

2. If the answer was in the affirmative, of how much value was the operation?

In answer to the first, it was maintained that some lives had been saved by the operation in pseudo-membranous croup, and the same thing could be said regarding diphtheria, although the chances of success were much less than in the former disease. It was to be regarded, therefore, as an operation having a certain value, but the amount of value was a question for secondary consideration. Dr. Flint claimed, however, that although the chance of success might be ever so small, the operation should not be withheld. It was the duty of the physician to place before the patient or friends of the patient the fact that at the proper time, and under proper circumstances, tracheotomy was a means of saving life. The operation relieved suffering and contributed to euthanasia, and for that reason alone it was justifiable. The amount of value was to be determined only by trustworthy statistics showing the proportion of instances in which recovery followed its performance.

[CONTINUED IN NEXT NUMBER.]

On the Action of Iron in Anæmia.

In the course of his researches on the blood of anæmic patients, M. Hayem has ascertained some facts supporting the opinion, that iron acts on the ultimate nutrition of the red globules. In health the number of globules contained in a cubic millimetre of blood, taken from the finger, is, on an average, about 5,500,000. When the anæmia is moderate in degree, the number of globules is about the same as in health; but they are altered in size, and contain less hæmoglobine. Thus, in one case, there were 5,352,000 globules in a cubic millimeter of blood; but the blood was not more colored than it would be with 2,500,000 healthy globules. Under the long continued use of iron, the globules diminished in number, but they acquired their normal dimensions and became richer in hæmoglobine. The number diminished to 4,150, 000, but they were equal in coloring power to 4,000,000 healthy globules. When the anæmia is extreme, the number of globules is diminished, *e. g.*, to 2,500,000. Under the use of iron a number of new, small, pale red globules first appear, and then the blood undergoes the same changes as in an anæmia of moderate intensity, so that when a cure is effected the globules are individually physiological, but are less numerous than at certain periods of the disease.

In the anæmia of fatal cachexias the blood contains globules larger than those of normal blood. When the anæmia becomes extreme, the number of these hypertrophied elements increases, and, in spite of the presence of very small elements, the average dimensions of the glob-

ules vary less from the normal than in less intense anæmias. The number of red globules then decreases daily, and iron can no longer arrest the progress of the change. Nevertheless, even then iron may cause the globules to take up hæmoglobine, and the hypertrophied elements may even possess more coloring power than healthy globules. In one case the blood contained only 414,062 globules per cubic millimetre; but the average value of each globule was 1.34.—*The Medical Record.*

Case of Tetanus Treated with Calabar Bean.

H. W., aged forty-seven, a gardener, received a wound in the web between the thumb and index finger, from a branch of a laurel bush that had been cut off obliquely. The wound was about half an inch deep. It was carefully cleansed and kept open for a fortnight. Six days after the injury symptoms of tetanus set in, and five days later, on June 16, 1875, he was admitted into St. George's Hospital, under the care of Dr. Dickinson and Mr. Pollock. At that time the symptoms of tetanus were well marked. He was in a condition of opisthotnos, and spasmodic contractions of the muscles of the neck and face, lasting about five seconds, occurred ten or twelve times a day. He was at first put on twelve grains each of chloral hydrate and bromide of potassium, with temporary improvement. On June 19th, however, he was much worse, the spasms recurring five or six times a minute. One-eighth gr. of extract of Calabar bean was injected subcutaneously every hour, from 11:15 P.M. until 7:15 A.M., on the 20th. After this the spasms occurred at intervals of about two minutes, and were less severe. He felt easier, and slept some. On the 22d the injections were given every hour and a half, alternately, with a pill containing one-sixth of a grain of the extract. After 10 P.M. the pills and injections were repeated every two hours. On the 24th, the improvement still continuing, the injection was increased to one-fourth of a grain. On the 25th the treatment was discontinued for five hours, but as the spasms became more frequent, it was resumed as before. On the 26th the spasms did not occur, except when the fauces were tickled, and the injection was given only every four hours. On July 1st the injection was given only every third hour during the day, and a pill every third hour during the night. On July 3d there was a slight return of spasms. Two-thirds of a grain of the extract was given subcutaneously every three hours during the day, and as a pill at night. On the 4th one grain of the extract as a pill was ordered every three hours during the night; the injections as before. On the 5th the injection was increased to one grain, and the pill to one grain and a half; and on the 9th the injection was increasd to one grain and a half, and the pill to two grains, given as before. The spasms now stopped, but the patient continued to have some pains in the back for three weeks, and his legs were still weak and stiff on August 18th, when he was sent to the convalescent home. He was seen some months afterwards in good health.—*Atlanta Medical and Surgical Journal.*

Lupus of the Mouth and Pharynx.

In the *Centralblatt f. d. Med. Wissensch*, No. 55, 1875, we find an extract from a work, by G. Homolle, entitled "*Des Scrophulieds Graves de la Muquése Bucco pharyngilune,*" from which we glean the following:

Lupus of the buccal or pharyngeal cavity generally manifests itself as a complication of lupus of the external skin. Only in rare instances does it manifest itself primarily if the cutis be free. In the former instance the mucous membrane presents the following forms of disease: livid erythema, granulations, an hypertrophic and rarely an atrophic appearance, ulcerations, perforations, and lastly the exceedingly rare transformation into an epithelioma—appearances which are markedly influenced by the seat of the affection. The depression, pale or brownish hue of the remaining cicatrices are not characteristic. Stellate cicatrices of the pharynx, as well as the less frequent adhesions between the same and the soft palate, are also observed. The peculiar indolence of the symptoms, even in the more destructive onslaughts of the disease, may be considered a functional symptom, in which case the sensibility of the parts is markedly diminished.

Primary lupus does not differ from secondary as far as the elementary lesions are concerned. Two forms may be mentioned: primary lupus, when the affected parts become atrophic, and the primitive ulcerative scrofulides, if the same undergo destruction. Primary lupus generally presents conglomerate knots, sometimes of a hypertrophic type; very rarely are isolated knots noticed. The ulcerating scrofulides begin with a purulent discharge, and soon give rise to deformities. "Symptomatically, these diseases do not generally proceed in as indolent a manner as secondary lupus."

Sometimes we notice as complications glandular enlargements, otorrhœa, keratitis, conjunctivitis, and very rarely œdema glottidis. As far

as the general condition goes, four clinical types may be observed, varying with the subject: 1. If they be healthy and well nourished; 2. If they, although of a healthy appearance, reveal some traces of scrofulous disease; 3. A decidedly strumous habit; 4. If they be affected by congenital syphilis (in young subjects). The patients are generally from ten to twenty years of age.

The author is very decided in his opinion that lupus is an undoubted scrofulous disease, and calls all ulcerative processes scrofulides.

The diagnosis of primary lupus of the mucous membrane, particularly of the ulcerative forms, is a very difficult one. Only after a very careful examination, an exact and truthful history, and a due observation of the train of syphilis, will we be able to exclude syphilis. In consequence of the beneficial effects afforded by anti-syphilitic measures, we must be the more careful in our diagnosis.

The prognosis is generally dubious, particularly in regard to a complete cure. Relapses are of frequent occurrence.

The first indication in treatment is to improve the general health. The administration of cod-liver oil and iodine are the most fruitful. Locally, tincture of iodine, chromic acid, chloride of zinc, nitrate of silver, etc., and during severe pains iodoform in glycerine should be applied.—*Louisville Med. News.*

On the Composition of Different Kinds of Cocoa.

BY CHARLES HEISCH, F.C.S.

It is well known that different kinds of cocoa fetch very different prices; but as far as I am aware, no careful examination has been made to ascertain if these differences are caused by any difference in their composition regarded as articles of food, or if they be due solely to differences in flavor, which after all may be only matters of taste. In none of the published analyses of cocoa which I have seen, is any mention made of the kind of bean analyzed; it is therefore not surprising that the results published vary very considerably. Thus, while in Dr. Hassall's book we are told that cocoa contains albuminoid matter 16.7 per cent., in Dr. Parkes' Practical Hygiene it is stated to contain from 13 to 18 per cent. of protein substance. In neither case is it mentioned whether the bean was examined raw or after roasting. Having through the kindness of a friend obtained samples of various cocoa beans, both raw and roasted, which he assured me were unmixed, I made a number of analyses of the roasted beans, which, as far as food is concerned, are by far the most interesting, as I believe the raw bean is never employed. The results are shown in the following table. They are not so complete as I had hoped to make them, but they comprise the more important constituents, and as such analyses can be done only in the intervals of more pressing work, I prefer leaving the remaining less important for a future communication. In the first column of the table is noted the proportion of husk in the different varieties. This difference appears to be mainly due to the husk in some kinds being much thicker than in others; in all cases these thick husks separate much more easily from the bean in the process of roasting, and can be taken off with much greater facility. The other estimations are made on the roasted bean after removal of the husk. The albuminoids are calculated from the total nitrogen found by combustion with soda lime, the nitrogen contained in the theobromine is thus included, but in the roasted bean this is so small that the difference is hardly worth consideration; herafter, I hope to estimate the theobromine in the different varieties, as well as the starch, gum, cellulose, etc. It will be observed, that in none of the above samples do the albuminoid substances reach the amount mentioned by Hassall or Parkes; but as neither of them give the method by which the albuminoids were ascertained, no attempts can be made to account for the difference. The amount of these substances in Para, which is about the lowest-priced variety, is, with one exception, the highest in the table, so that, viewed as an article of food, it is superior to some of the more expensive kinds. The soluble ash consists, to a great extent, of phosphate of potash, the phosporic acid in the portion insoluble in water being mostly, if not entirely, combined with magnesia.—*The American Chemist.*

RESULT OF EXAMINATION OF ROASTED BEAN AFTER REMOVAL OF HUSK.

	Percentage of Husk.	Fat.	Nitrogen.	Albuminoid Substances	Ash.	Ash Soluble in Water.	Ash Soluble in HCl.	Phosphoric Acid in Ash calculated as H_3PO_4.	Moisture.	Starch, Gum, Cellulose, etc.
Caracas	13.8	48.4	1.76	11.14	3.95	2.15	1.80	1.54	4.328	2.19
*Trinidad	15.5	49.4	1.76	11.14	2.80	9	1.90	.93	3.848	2.82
Surinam	15.5	54.4	1.76	11.14	2.35	.80	1.55	1.23	3.762	8.35
Guayaquil	11.5	49.8	2.06	13.03	3.50	1.75	1.75	1.87	4.143	0.47
Grenada	14.6	45.6	1.65	12.40	2.40	.60	1.80	1.35	3.903	5.70
Bahia	9.6	50.3	1.17	7.40	2.60	.90	1.70	1.26	4.403	5.80
Cuba	12.0	45.3	1.37	8.67	5.90	.95	1.95	1.13	3.723	9.41
Para	8.5	54.0	2.00	12.66	3.05	1.40	1.65	1.00	3.962	6.33

—*The Analyst.*

*I am inclined to think that the Trinidad sample was not of the finest quality.

Iodine as a Reagent for Starch.

By M. Ed. Pouchot.

In examining a specimen of butter which was suspected to be adulterated with fecula, the author observed that the sensibility of iodine as a test for starch was considerably interfered with by certain nitrogenised organic matters, notably by albumen. The turbid whey which drains from coagulated milk acts in this respect like white of egg. The following experiments demonstrate this:—If albumen be added to iodide of starch suspended in water the colour disappears. If albumen be added to mucilage of starch, the further addition of water saturated with iodide produces no coloration, unless it be used in very large excess. The albumen probably acts by combining with definite proportions of iodine both before and after the union of the latter with starch. In effect, when a solution of white of egg is poured into one of iodine, the colour of the latter disappears. It is scarcely necessary to add that the further addition of starch is without action as regards color. Another way of demonstrating the fact is by triturating any fecula in a mortar and incorporating with it a little albumen, then allowing iodine solution to drop upon it. At first each drop produces a blue stain, but this disappears in a few seconds, as it spreads, and so comes in contact with sufficient albumen.—*The Chemist and Druggist.*

Causes and Prevention of Disease.

The local and public causes of destructive diseases which strike down the most valued classes of inhabitants, as well as the poor and those who are least protected, because unnoticed, are every year endangering the loss of lives which the State should protect and save by the practical application of sanitary knowledge for the prevention of such causes of disease and mortality. In the State of Massachusetts the eminent financier and economist, Hon. Mr. Plunkett, stated, after a few years' operations of the State Board of Health, that in single large villages, the saving of life and health by agencies exerted by that Board had been worth more in cash than the entire annual expenses of the Board.

During the census year of 1870, New York, with a population of 4,382,759, has a recorded mortality of 69,095; and that number is, with good reason, believed to be considerably less than the actual mortality, because this State has no system of registration of deaths. In the total record of mortality, 17,596 deaths (25.46 per cent.) were caused by zymotic diseases, which are the most preventable of disorders, and comprehending 6,930 deaths from diarrhœal diseases; 3,403 from scarlet fever; 2,096 from typhoid fever, and 864 from diphtheria, a disease which has so increased in prevalence since 1870, as, in 1875, to have destroyed not less than 4,000 lives.

Of the other causes of mortality—namely, the remaining three-fourths—11,598 died of consumption, and 8,458 from other diseases of the respiratory organs—and these diseases are largely dependent upon preventable causes, as well as the zymotic diseases. 2,664 deaths resulted from violence, burns, scalds, drowning, suffocation, explosions, "accidents," etc., etc., in the main due to the want of intelligently directed public measures for their prevention. Taking all together, of the total number 69,095 deaths from all causes, 53,902 from the eight categories above given are in large measure preventable by well recognized sanitary measures, such as no less than twelve States of the Union have established during the past few years.

Again, that this waste of life may be made still more apparent: of the total number of deaths, 69,095, for the year, 31,602 were of infants and children under 15 years of age; and of these 27,071 were under five years of age. That the loss in pecuniary value to the State from these 31,602 premature deaths may be duly appreciated, it is only necessary to remark that the cost of their sustenance from birth to death was a total loss—they died without living long enough to render any material return for cost, and to this is to be added the expense of sickness and burial. By assuming that the average lifetime of the whole 31,601 infants and children was only five years, and that the cost of this five years sustenance, sickness and burial was only $200 each, we have in this item a dead loss from premature deaths of children, $6,320,400.

Again of the deaths enumerated for the year under zymotic diseases, 2,029 were caused by typhoid fever, a disease which kills most of its victims in the prime of life, at a time when the individual is of most value to his family and the State. The average value of lives taken by typhoid fever (of both sexes), at a moderate estimate, is not less than $1,500 each. The loss to the people from this cause, therefore, amounts to over $3,000,000 annually—for there is no question that considerably over 2,000 deaths from typhoid fever have occurred annually in the State for many years, and of all the diseases enumerated, typhoid fever is well known to be preventable by sanitary measures.

The more closely unsanitary conditions are

examined, the more extensive do their ramifications appear, and in whatever degree the duration of life is diminished, in the same degree so much productive power is lost. And every community is poor and powerless in the inverse ratio to its standard average duration of life and health. Every death under the age of twelve years at least carries with it a positive loss to the community in which the individual has lived, because, previous to that age, sustenance involves a direct outlay, and if the life of the individual is preserved, a productive member of society is added and remuneration rendered. And as regards adults—if the probabilities of life in any community are so low as to give the average adult age at death below the ripe maturity of life, the proportion of widowhood and orphanage is increased, and the productive members of society are proportionately burdened, and thus it is that burdens are created and costs entailed upon the industrious survivors of every community in direct ratio with a high mortality.

Such are, in brief, some of the considerations which appeal to the most enlightened sense of the Legislature, in the interest of human health and life, and in the most catholic spirit; in the way of which, no narrow-minded sectional discords or local jealousies should for a moment be tolerated, against this much needed measure. —*Sanitarian.*

PLACE.	Period of time.	Total Deaths of persons over 5 years of age.	Deaths from Consumption and Lung Diseases of persons over 5 years of age.	Percentage
New York,	1876.	14.944	7950	53.19
	January, 1877.	1121	680	60.66
Philadel'a, Pa.	8 weeks in Jan. '77.	567	248	43.74
Brooklyn, N. Y.	January, 1877.	457	240	52.51
St. Louis, Mo.	Jan. & 1 week in Feb. 1877.	367	214	58·04
Chicago, Ill.	"	378	149	39.41
Baltimore, Md.	"	374	176	47.09
"	1876.	4782	1742	36.42
Boston, Mass.	Jan. 1877.	313	157	50.16
Cincinnati, O.	"	228	178	78.07
San Francisco.	Dec. 1876.	396	134	33.97
New Orl'ns, La.	Dec. '76 & Jan. '77.	946	236	24.94
Wash'ton, D. C.	" "	815	276	33.86
Pittsburg, Pa.	Jan. 1877.	168	79	46.66
Prov'ence, R. I.	"	108	46	42.16
Milwauk', Wis.	"	94	30	31.94
Richmond, Va.	Jan. & 1 week in Feb. 1877.	91	53	58.24
New Haven, Ct.	Jan. 1877.	69	27	39.13
Toledo, Ohio.	December, 1876.	31	12	38.71
Mobile, Ala.	"	74	36	48.65
Dayton, Ohio.	Jan. 1877.	25	20	80.00
Nashville, Ten.	"	39	22	56.41
Wh'ling, W. V.	1876.	318	131	41.19
Buffalo, N. Y.	Jan. 1877.	112	52	46.43
Knoxv'le, Ten.	1876.	97	64	66.00
Paterson, N. J.	Jan. 1877.	42	21	50.00
Petersburg, Va.	"	21	5	23.83
Selma, Ala.	"	10	8	80.00
Yonkers, N. Y.	"	14	8	57.14
Memphis, Ten.	"	78	47	60
		27.079	13041	

Average per centum 48.89.

We publish a table from the *Sanatarian*, which we confess, astonishes us. We knew the mortality from disease of the Lungs, throat, etc. and consumption was large, but had not been prepared to expect it was nearly *fifty per cent.* of the deaths in the places referred to, of persons above five years of age. It is a large mortality to credit to any one disease or class of diseases, and should bring our readers to consider the means of reducing this. It is simply a recognition of a proposition that if a person has an attack of them again with disease, the chances of recovery are only about one half.

We cannot, in this connection but refer to a letter from a physician, who has used largely of Firwein. "I believe, if it could be used in time, and persistently, the mortality from lung disease would be reduced one half." It is equally important to enquire how far a scrofulous diathesis has to do with the progress and fatality of this disease. We believe full one half of all lung diseases, are due to a Scrofulous hereditary condition—and will take occasion in another number, to refer to them.

On the Purity of Chloral Hydrate.

A FEW months ago some French and English journals contained complaints about certain impurities in commercial chloral hydrate. One of these complaints referred to the supposed presence of free hydrochloric acid, which was said to contaminate it, "because white fumes became visible on appreaching to it a glass rod moistened with ammonia." Mr. C. Anneessens criticises this statement, and maintains, very correctly, that such a test is no proof of presence of hydrochloric acid. Indeed, perfectly pure chloral hydrate, at any but very low temperatures, always fumes when brought near ammonia, and the presence of hydrochloric acid can only be demonstrated by means of silver nitrate. The white cloud which is formed from the fumes of ammonia and the volatilized vapor of chloral hydrate, is due to the formation of ammonium formiate. This may easily be proved by absorbing the vapor of chloral with a piece of blotting-paper saturated with ammonia; an abundant white cloud is produced. The paper is washed with distilled water, the excess of ammonia is evaporated, solution of silver nitrate is added, and the whole heated. The mixture immediately becomes cloudy, then blackens, and disposits upon the sides and bottom of the vessel a fine mirror of metallic silver.

It is, however, possible that hydrochloric acid may be present, in this case silver nitrate will give the characteristic precipitate. But the

following reaction may be used in confirmation: Add to the solution of chloral a solution of sodium sulphide. If the chloral is pure, the mixture turns yellow, then becomes cloudy, and gradually darker in color, changing to rose or brick red, according to the quantities of the ingredients, but always to the last named tint if heated. If the chloral is contaminated with hydrochloric acid, however, the same reagent, under the same circumstances, produces a deposit of sulphur, and a disengagement of sulphureted hydrogen.

Chloral hydrate is volatile at ordinary temperatures, like iodine and camphor. It may be considered pure if it has no acid [or, at least, only a very faintly acid] reaction upon moistened litmus paper, does not stain paper, is not affected by silver nitrate, gives off no reddish vapors with nitric acid, and yields 72.2 per cent. of chloroform when decomposed by caustic postassa.—*New Remedies.*

Adulteration.

By Adolph W. Miller, M. D. Ph. D.

(*Read at the Pharmaceutical Meeting Jan.* 19, 1877.)

Some extraordinary accounts of falsification of drugs and chemicals having recently come to the notice of the writer, it is deemed advisable to place an account of then on record. While they embrace perhaps nothing that is absolutely new, the subject is presented in a new phase in so far as it relates to most villainous frauds practised on suffering humanity by apparently respectable druggists, whose only plausible excuse for these rascalities seems to be excessive and ruinous competition in business. It may be prefaced that these statements are not mere hearsay testimony, but that most of them are derived from parties having an actual knowledge of the transactions referred to. Oregon balsam of the fir (so-called) appeared in the New York market several years ago. Prof. Maisch then examined it, pronounced it to be of suspicious appearance, and raised the query: "Is such an article known on our Pacific coast, and if so, what is its source, and how is it obtained?" ("Am. Jour. Pharm.," 1874, p. 106.) This inquiry can now be answered by stating that the article in question emanated from St. Louis, Mo., where it was manufactured by carefully melting two parts of the finest select white rosin with one part oil of turpentine. A small amount, generally about one ounce to five gallons, of oil of wormwood was subsequently added, this having been found to be most efficacious in completely disguising the ordinary terebinthinate odor. The "balsam" was then shipped to a prominent New York broker, who succeeded in selling considerable quantities of it, as the genuine article happened to be at that time unusually scarce and highpriced.

Sulphate of quinia, put up in the usual style of the American manufacturers, has heretofore been regarded as being above reproach. Even our lately much abused dealears in *pure* essential oils of New York, contented themselves with operations in Pelletier's French quinia. My information is to the effect that a year or two ago in one of our Western cities the labels of American manufacturers were deliberately soaked off, after which an admixture of salicin was introduced. The label was then replaced and the article disposed of. Another somewhat more enterprising dealer in the same city had muriate of cinchonia manufactured on his own premises and used this to adulterate sulphate of quinia to a large extent. In this case the preparation was put up in tin cans, without bearing the name of any manufacturer.

Italian essential oils, chiefly lemon and bergamot, were imported by a Western druggist to the extent, of 100 cans in one lot. They were false seals and brands.

While in the East, the adulteration of tartar is almost entirely confined to grocers and spice mills, in the West the wholesale druggists also seem to indulge extensively in this fraud.

The labels and wrappers of English calomel have been successfully imitated in the West, and large amounts of this pseudo-imported chemical have been there disposed of.

If it be not deemed inappropriate to draw a moral from the above facts, which are vouched for by the parties best qualified to do so, this would embrace chiefly two points, namely, an injunction to continued vigilance and close scrutiny of all substances that can be adulterated, and also an appeal for a little more liberality in making purchases. It seems to be conceded that the minimum running expenses of carrying on the wholesale drug business are from 5 to 8 per cent. of the sales: the expense of salesmen varies; usually, from 5 to 25 per cent. of the amount of their sales, 10 per cent. being perhaps a low average. A little calculation will therefore suffice to show that when goods are sold direct to consumers at less than 10 per cent. margin, or though the instrumentality of traveling salesmen at less than 20 per cent. profit, the inference may be fairly drawn that there are just grounds for suspicion in the case.

Arrowroot.—H. P. Marsden received some time ago an original package of arrowroot, the appearance of which was all that could be desired. It dissolved completely in boiling water, but did not form a thick mucilage. Examined under the microscope it presented elliptical grains, about three times as large as those of maranta, and mostly provided with a well-developed hilum, which latter characteristic points to tacca fecula from tacca pinnatifida. He also mentions having received two packages with damaged arrowroot; in the first the musty smell pervaded the whole contents, the second keg, however, presented nothing unusual in the top layer, but the last half of it was musty. Mr. Marsden, therefore, recommends to examine the whole package, and not be satisfied with a small sample from the top.

Balsam Tolu.—Rich. V. Mattison found this article adulterated to the extent of 63 per cent. with a balsam prepared from the bark of Liquidambar orientale, and nearly 11 per cent. of bark and charred ligneous matter.

Cayenne Pepper.—A lot of ground capsicum was received by the writer, which on examination by Prof. Harrington proved to be a mixture of over 50 per cent. turmeric, wheat and corn-starch, and a small per centage of horse-radish.

Ergot.—Mr. Henry Trimble exhibited an unknown substance, at the pharmaceutical meeting of the Philadelphia College of Pharmacy, which had been sent from Maryland to be sold for powdered ergot. It had no resemblance to the drug.

Golden Seal.—A lot of about 500 pounds of Hydrastis Canandensis offered for sale in Cincinnati, proved on examination to be about one-half beet-root, while mixed throughout the entire mass were serpentaria, cypripedium, sanguinaria, May apple, and other substances.

Hyoscyamus.—In a lot of hyoscyamus, purchased in New York, the writer found bay leaves, straw, feathers, oats, stone, branches from unknown plants, and wood, to the amount of about eight per cent.

Oil of Cade.—J. M. France found some of this oil to be simply liquid tar, flavored with oil of juniper.

Oil of Peppermint is largely adulterated; the most successful seems to be the addition of from 10 to 20 per cent. of freshly distilled oil of pennyroyal. The following seems to be a perfect test: Take for test solution 1 drachm chloral hydrate, ½ a drachm sulp. acid, C. P., rub together in a glass mortar, and add alcohol, drop by drop, until a clear solution results. In a watch-glass put a few drops of the oil to be tested, and with a glass rod, add an equal quantity of the test, rubbing briskly for a moment; after standing for a few minutes, if there is adulteration with pennyroyal, the mixture will assume a dirty olive green color, which grows darker on standing. Pure oil of peppermint will assume a rich cherry-red under similar treatment.

Oil of Wintergreen.—Specimens adulterated with chloroform and oil of sassafras have been found on the market. A mixture of four parts of oil of sassafras and one part each of chloroform and oil of wintergreen has a specific gravity nearly the same as oil of wintergreen. The presence of chloroform can easily be detected by shaking the mixture in a moderately warmed test-tube, when the odor of chloroform will be perceptible, by fractional distillation between 60° and 70° C. the chloroform can be separated. The residue treated with nitric acid will show the presence of oil of sassafras by turning it dark red.

Bromine.—Reyman found a specimen of bromine to be contaminated with about 10 per cent. of foreign substance, which he found to consist largely of bromoform. The characteristic odor of bromoform, which is particularly strong, produced when the bromine containing it is mixed with a solution of iodide of potassium, is a sure proof of its presence.

Carbolate of Lime.—Chemical analysis has shown that most of this article in the market is nearly worthless, containing hardly any phenol, but owe their smells to various tar oils possessing little or no disinfectant power.

Coffee.—Five samples ground coffee put up in packages, analyzed by C. H. Eddy, gave the following results:

Samples.	Chicory approxim.	Other additions.	Total Starch.	Coffee.
1. Pure Mocha and Java	22 per ct.	....	. .	Found.
2. Pure Rio	24 "	....	.....	"
3. Centennial Prize	22 "	Oats and peas	9 per ct	No caffeina.
4. Royal Java	31 "	" "	5 "	"
5. Gov'm't Java, warranted	38 "	Carrots and peas.	2 "	"

Proceedings of the American Pharmaceutical Association, 1876.

"How to Get Rid of a Cold" is being discussed by the country papers. Put a little nitroglycerine up your nose, then hit it with a sledge hammer, and the cold will never trouble you again.—*New York Com. Adv.*

The Influence of Phthisis Upon Child-Bearing.

Amongst the numerous theses sent in this year for the Doctorate of Medicine of the Faculty of Paris is one by M. F. Ortega upon the above subject. The essay is fairly summarized in the *Revue des Sciences Medicales*, and the following are among the chief conclusions arrived at by the author as a result of investigation in ninety-five cases. Phthisis has in the first place a marked effect upon conception; thus the author only met with thirteen out of his ninety-five females who, after the commencement of pulmonary symptoms, bore more than one child, and a third pregnancy was very rare in such circumstances, although many of the women were multiparæ. In all these cases the phthisis was in the first and second stage, in one only it was advanced. In this case there was an abortion at the fourth month, and death shortly after. As to pregnancy, more than one-third of the cases aborted, or were premature deliveries, and reckoning only those who had a tubercular history, in but one-half did the pregnancy last till full term. Phthisical mothers are moreover unable to suckle their offspring, for setting aside ten cases in which phthisis developed during and probably under the influence of lactation, only eleven out of sixty-four infants, were suckled by their mothers, and these mothers healthy at first, soon showed sings of insufficient nutrition, and died with enteritic symptoms. M. Ortega's cases show also that pregnancy hastens the evolution of phthisis to a marked extent, delivery being rapidly followed by the death of the mother, although the first days of the puerperal state are generally marked by a considerable abatement in the pulmonary symptoms; both pregnancy and lactation he regards as exciting causes of phthisis in predisposed subjects.—*The Cincinnati Lancet and Observer.*

Bacteria—Their Nature and Relations to Disease.

Dr. T. E. Satterthwaite (*Med. Record Dec.* 1875) in some interesting discussion of this, concludes.

1. Bacteria are certain vegetable organisms which probably belong to the algæ; they are found abundantly in nature but chiefly where there is moisture.

2. They exist in the body in health covering the mucous membrane from the mouth to the arms, and sometimes penetrate a certain distance into the system without causing symptoms of disease.

3. They also exist in putrefying fluids and in various diseased processes, occurring in hot and cold abscesses, in the blebs of erysipelas and in simple blisters.

4. It is doubtful whether the virulent principle of infective diseases is albuminous.

5. This principle does not reside in the perfectly clear fluid that passes through porous clay. In putrid infectious fluids this appears to be certain. The poison is rendered less virulent by repeated filtrations through common filter paper.

6. The virulent principle may be boiled for hours, filtered numbers of times in the ordinary way, boiled with alcohol, and again filtered and dried, and yet the watery extract of such a dry residue will produce septic symptoms. It is therefore soluble or at least suspended in water.

7. The liquid which is thus poisonous may be clear to the eye but contains granules under the microscope.

8. These granules have not produced bacteria in a number of instances when they were placed in a suitable condition to do so.

9. We cannot therefore feel that satisfactory evidence has been brought to show that in any of the diseases or processes enumerated minute organisms are the sole and efficient causes of disease.—*Detroit Med. Jour.*

Fever Pathology.

Dr. H. F. A. Goodridge (*Brit. Med. Jour.* July 29, 1876), in a very interesting sketch of fever pathology, sums up our positive knowledge as follows:

The characteristic elevation of temperature of the body in fever is mainly due to increased production of heat. Besides the increased production of heat there is a disorder of nutrition, an abnormal disintegration of the body, and particularly of the muscular tissue, evinced, on the one hand, by increased excretion of urea and potash salts, of carbonic acid, and perhaps also by water; and on the other by progressive loss of body weight. The increased production of heat occurring at a time when a principal source of normal heat production, viz., the food ingested, is all but completely cut off, must have its origin in the abnormal disintegration of tissue. The converse may also hold good to a greater or less extent, there being thus action and re-action. However probable may be the hypothesis of the intervention of the nervous system, the connecting link between the entrance into the organism of the fever ex-

citant, the pyrogenic matter (be this *contagium vivum*, or what it may), and the onset of the characteristic phenomena, have not yet been demonstrated. In short, the proximate cause of fever remains undetermined.—*Detroit Med. Jour.*

Rhus-poisoning.

Dr. F. L. James, of Osceola, Ark., writes the following to the New Remedies for November: "The experience (*unfavorable*) of Dr. Lawrence Johnson with the fluid extract of gelseminum sempervirens in rhus-poisoning (detailed in your October number) is that of numbers who have tried the specific of the Medical News. I am one of these unfortunates who cannot come in contact with the rhus vine without suffering; and as our woods are full of it, I am not unfrequently poisoned. For years I tried first one remedy and then another, with more or less (generally the latter) success, but occasionally, when I would get a 'good dose' of it in the spring, nothing seemed to give me any relief. Finally, on applying some litmus paper to the pustules one day, I noticed that the serous fluid which escaped was intensely acid, instantaneously reddening the litmus wherever it came in contact with it. On this hint I acted. Having some bicarbonate of soda on my washstand, I rubbed a little of it upon the pustules, and with almost immediate relief. A second application completed the cure. Since then, whenever I discover that I have come in contact with the poison, I simply rub the part well with the dry bicarbonate of soda. The common cooking-soda—subcarbonate—is quite as efficient, I find, as the sodæ bicarb. exsic. of the pharmacopœia. Since its success in my own case I have frequently prescribed it to my patients similarly afflicted, and with almost unvarying success. I say *almost*, for I have met with one case, and one only, which did not yield to it immediately, and this one was benefited by it. It affords prompt relief to the burning and itching which are such prominent and distressing symptoms in this singular affection. Having also seen the fluid extract of gelseminum vaunted as a specific, I tried it thoroughly in three cases, without affording the slightest relief. Next to the soda bicarb. the following remedies have afforded the best results in my hands, in the order named: Borax dissolved in glycerine, (boracis, ʒ i; glycerinæ, ʒ i); aqua ammonia (ammon. aquæ, fl. ʒ ij; ol. oliv., fl. ℥ i); sugar of lead (a wash of the saturated solution or the liquor plumb. diacet. diluted). Quinine and iron, administered internally in those cases where a tonic was needed, hastened the cure."—*Louisville Med. News.*

Carbolic Acid?

In September last, a meeting of Physicians in New Orleans* was called to discuss the question of the use of Carbolic Acid by the Board of Health, comprehending the following points. 1. Is carbolic acid a disinfectant? 2. Is it an antiseptic? 3. Is it a poison? 4. Is it possible to disinfect the atmosphere of a whole city by *carbolic* acid or other means?—After a good deal of discussion a committee was appointed, which subsequently submitted the following report, which was adopted, that:

1st—Carbolic acid as used for purpose of "disinfection" by the Board of Health in New Orleans during the years 1867, '70, '71, '72, '73, '74, and '75, has failed to arrest small-pox, scarlet fever and yellow fever.

2d—It has, in several instances, proved injurious to the inhabitants of the "*disenfected*" districts.

3d—The facts observed in New Orleans during the practice of carbolic acid "disinfecting" upon a larger scale than ever before practiced in the history of sanitary science, sustain the view held by high authorities that is it impossible to disinfect the atmosphere of an entire city, or even a circumscribed area, as of two or more squares. Cases of yellow fever have occurred in succession, at long intervals, in houses and localities which have been most thoroughly subjected to the so-called "carbolic acid disinfection." Instances have been observed with unacclimated individuals returning from the country before cold weather had put an end to the disease, and entering those districts of the city in which carbolic acid had been most lavishly employed as a "disinfectant," have been attacked by yellow fever.

4th—Yellow fever has followed its usual course....No connection has been traced between the decline and cessation of the disease and the amount of carbolic acid used for purposes of disinfection.

5th—The absence of epidemics (1871, '72, '73, '74, and '75,) is believed to be due, not to carbolic acid disinfection, but to other and usual causes.—*The Sanitarian.*

MRS. ANNIE OLDHAM COOK, the wife of Dr. J. L. Cook, of Henderson, recently made her *début* as a lecturer before a Louisville audience. Her subject was the "Conundrum of the Nineteenth Century," which turned out to be what to do with the women. Her audience was much pleased. We bespeak for the accomplished lady a warm reception from the profession wherever she may go, both on her own and her husband's account.—*Louisville Med. News.*

Monthly Summary.

Who Should Travel with Invalids.

An invalid physician, writing to the Phila delphia Reporter, remarks: "The best attendant on a sick man is wife, mother or sister, in the order mentioned. A woman, in the absence of her husband, should always have a woman attendant. The most melancholy cases of sickness I have seen on my travels were those who had been sent abroad alone. Lonely and despondent, they languished in all the health resorts, the object always of a kindly sympathy, but no less showing that want of care that love and companionship alone can furnish. A manservant is a better attendant for a man than a male friend, even though the latter be a brother. The one is always on hand; the other will say, 'Well, old fellow, you're getting along all right, I'll go out for a few minutes,' and a disappearance for a half day, or from supper to bedtime, marks the measure of his allegiance. It is so because it is human nature. A woman is happier with the object of her care, and if she leaves it for an hour, returns in a half, and then blames herself for the length of time away."—*Louisville Med. News.*

Ergot in Leucorrhœa.

Dr. L. J. Vogel contributes the following case to the Medical Brief: "History of patient as follows: woman, aged thirty-five years; married; has three children, the youngest aged five months, and nursing. She is rather plethoric, and of an extremely nervous temperament; has always enjoyed fair health, excepting at the periods of nursing her children, when she always become afflicted with constant mammary pains and engorgement of the organs, and following this was an obstinate and profuse leucorrhœa, and continuing during the entire period of lactation. On vaginal examination I could only discover a slight uterine engorgement. A host of remedies were prescribed, but no permanent relief was afforded. Finally she was placed upon fluid extract ergot in thirty-drop doses, and the breasts supported with an appropriate bandage. In the course of twelve days the profuse leucorrhœa, with other abnormal symptoms, was entirely arrested. The mother is now enabled to nurse her child with perfect impunity."—*Louisville Med. News.*

A Novel Danger.

Mr. James Greenwood calls attention to the very common and dangerous practice of obtaining novels from the circulating library for the use of invalids recovering from infectious diseases, and returning them without their being properly disinfected. We do not know whether the full extent of this danger has ever occurred to Mr. Mudie, but it is no doubt a rather serious one. It might be obviated by establishing "an invalid's library." Meantime, it may be well to warn the good-natured friends of such invalids that the practice of returning such novels in this unguarded way exposes them to a penalty of £5, and that proprietors of a library are not, we imagine, altogether free from legal responsibility, if it can be shown that they are the conscious accomplices of the act.—*Amer. Med. Weekly.*

Locomotor Ataxia.

M. Charcot insists that it is wrong to speak of the loss of co-ordinating power as the fundamental symptom of locomotor ataxia, or as he prefers to call it, *tabes dorsalis.* In many cases this loss of co-ordinating power does not appear until five, ten, fifteen. or twenty years after the cerebral symptoms, the shooting pains, the enteralgic attacks, and sometimes the arthropathics have made their appearance. His own researches and those of his pupils have demonstrated that the sclerosis of the posterior columns, the characteristic lesion of locomotor ataxia, co-exists with the manifestation of shooting pains before the co-ordinating power is impaired. The disease cannot, therefore, at that time be said to be in a prodromal stage; it is really an existing disease. Moreover, ophthalmoscopic examination of tabetic patients who are afflicted with amblyopia or amaurosis reveals a pearly aspect of the papilla, a progressive atrophy, from which alone, even if all other symptoms be absent, the diagnosis of locomotor ataxia in in process of evolution may be made. Like Trousseau and Duchesne, M. Charcot believes that locomotor ataxia, when subjected to proper treatment at an early period may be cured or be arrested in its course, or will at least prove less rebellious to treatment. Hence the great importance of recognizing the disease as early as possible, before the loss of the co-ordinating power.—*The Medical Record.*

Carbolated Camphor.

M. Soulez, in the *Bulletin de Thérap.*, gives the following formula for carbolated camphor and an account of its composition: Dissolve 2.5 grammes of powdered camphor in one gramme of a solution of carbolic acid (of the strength of nine grammes in six grammes of alcohol). The solution is of oleaginous consis-

tency, pale yellow, smelling slightly of camphor, but having none of the disagreeable odor of carbolic acid. It boils at a slightly elevated temperature without decomposing, but appears to be decomposed by strong alcohol, which throws down the camphor in crystals. If a boilling solution of carbolated camphor be thrown into cold water, it instantly solidifies. It is miscible in all proportions with olive and almond oils. Chemical examination shows that the carbolic acid and camphor are not altered, and that they preserve their properties in the combination.—*New Remedies*

The Treatment of Diarrhœa in Hot Countries by the Sugar of Milk.

Dr. Talmy prescribes for the diarrhœa of hot countries, from 20 to 300 grammes of sugar of milk daily. He administers it in the simplest way: the sugar, dissolved in a little water or as a draught in the course of the day. An excellent mode of administration consists in putting the dose of sugar of milk to be taken, into half a litre or two litres of milk, according to the habits and the digestive capacities of the patient. The treatment is spread over several months, diminishing the dose as nutrition becomes more considerable and easier. According to M. Talmy's little work (published by Coccoz, Paris), the endemic diarrhœa of hot climates is the result of a functional lesion of the liver, which results in the diminution and even the suppression of the glycogenic function of the liver. The sugar of milk may thus replace the glucose which is wanting in the blood. *New Remedies.*

Tartrate of Iron and Potassa in the Treatment of Varicose Ulcers.

A two, four or six per cent. solution of the tartrate of iron and potassa (with the addition of a little ammonia to prevent precipitation) is recommended as a dressing for varicose ulcers. The solution is applied by means of charpie which is saturated and applied to the ulcer morning and evening, at first, and when cicatrization has commenced, in the evening only. Over the charpie place a dressing of simple cerate; should there be much pain, dress with opium cerate for a few days, after which use the solution exclusively. The charpie must be fine and the cerate covering abundant. Remove the charpie dressing after having saturated it so completely as to allow its removal without the retention of a single filament by the sore, as that would disturb the healing process.—*Detroit Med. Jour.*

On Temperature in Eclampsia.

Two theses, recently sustained before the medical faculty by M M. Diende and Herbart, bring new facts in support of the opinions urged by M M. Bourneville and Budin. Bourneville, while studying the temperature in diseases of the nervous system, has arrived at the conclusion that in eclampsia the temperature rises from the beginning to the end. If the disease is to terminate fatally, the temperature continues to rise, and reaches a very high figure. On the other hand, if the attacks disappear, the coma diminishes or ceases, the temperature will abate progressively and reach its normal grade. The importance of these conclusions, from a diagnostic point of view, is evident, and M Bourneville has succeeded in clearly differentiating eclampsia from uræmia, in which latter affection the temperature falls progressively. The new observations by Diende and Herbart confirm these conclusions. However, two exceptional cases reported by the former seem to show that the number of paroxysms is perhaps less important in a prognostic point of view. In considering the gravity of the disease, the paroxysm is but trifling compared to the temperature, which is everything. The course of the temperature is of great importance in establishing the prognosis and treatment, as was first pointed out by M. Budin (*Gaz. des. Hop.*, 1872), and the physician who takes the temperature every hour or two, will be materially aided in determining these.—*Amer. Med. Jour.*

Preparation of Saponin.

J. Christophson.—Coarsely pulverized roots of gypsophila struthium were boiled several times with water, and the decoctions concentrated to the consistence of syrup, and then brought to dryness in a drying oven. The pulverized aqueous extract was then boiled several times with alcohol of 83 per cent. and the decoction filtered while hot. On cooling, a yellowish brown substance separated out in flocks, which was brought upon a filter and washed with alcohol of 95 per cent. This substance, dried in a porcelain dish at about 50°C., constitutes impure saponin.

When pure, saponin is a white, amorphous substance, similar to starch in appearance. The taste is at first mild, then burning, and after a while it produces an itching sensation. It dissolves easily in water, reacts neutral towards vegetable colors, has a peculiar smell, and foams when vigorously shaken. In strong spirits of wine it is less soluble than in weak, and it can be obtained from an aqueous solution of alcohol in the form of crystals. The average of a

large number of analysis of saponin, from four different kinds of plants, is:

C. 54.117. H. 8.251. O. 37.632.

Boiled with dilute HCl. it is decomposed into sugar and a substance which has been called by Overbeck saporetin, and by Bolly sapogenin; and this decomposition is so constant in the per cents. of sugar and sapogenin, whatever be the source of the saponin, as to leave no doubt of the definite constitution of saponin as a glucoside. It is found in the roots of gypsophila struthium, and in those of saponaria officinalis, of the quillajarinde, and the seeds of agrostemma githago, and perhaps in the roots of senega. *American Chemist.*

Preparation of Raw Meat.

The following directions are given by the *Journal de Pharmacie* for the preparation of raw meat for invalids: Beef is preferable to mutton. The fat should be removed (one reason being that it may contain cysticercus). The best part is the *rump steak* (*sic*). The fibres are here best suited for rasping (*râpage*) in longitudinal direction. This is the best mode of division. Chopping removes from the meat most of its juice, and does not give such good division. The rasping is done with a sharp knife-blade—the sharper the better. The piece of meat should be pretty thick, and of lozenge shape; the rasping can be done on all the facings, in the natural direction of the muscular fibre. The piece should rest, held by one end, on a resistant and slightly inclined plane. The meat is generally reduced to the form of a pill or bolus, which is rolled in powdered sugar or crumbs of bread. If it cannot be taken thus, it may be given under the mask of bouillon, which should be cold. One of the best methods is to prepare a thin porridge of tapioca; let it cool until it cannot cook the meat in the least. Then the meat, finely rasped, is introduced into a small quantity of the cold soup till the mixture is complete. This mixture has the aspect and consistence of a fine soup of tomatoes. Next the tapioca porridge is gradually poured on this soup, the mixture being constantly stirred. Thus a homegeneous porridge is obtained, in which the meat is so well concealed that no one would detect it unless previously advised of its presence.—*New Remedies.*

Whooping Cough.

L. H. Washington M. D., Macon, Ga.

℞. Bisulphate of quinine, 16 grains; dilute sulphuric acid, q.s.; tincture of oranges, 1 drachm; water, to make 2 ounces. Mix. Dose.—Two teaspoonfuls every 3 hours, to a child 15 months old. Mr. Jno. Reynolds, who communicates the above to the *Lancet*, says quinine has proved in his hands a specific for whooping coughs. "It has never yet failed in a single instance, even in the severest cases, to give the most immediate relief, and in a few hours (i.e. from twelve to forty) to absolutely cure the patient.

Dangers from Santonine.

In using santonine it is well to bear in mind that comparatively small doses have produced convulsions of a somewhat grave character. A German contemporary lately reported a case in which poisonous effects were produced in a child two years old, by the ingestion of so small a dose as a grain and a half. Convulsions commenced in the face, and extended to the extremities, while the respiratory action was greatly impeded. Under warm baths, enemata, and artificial respiration, the patient recovered. The physician in charge of the case then instituted a series of experiments on the lower animals, and found that chloral and ether inhalations controlled the convulsions produced by santonine. He naturally argues that the same treatment should be pursued in the human subject when a poisonous dose is taken.—*Atlanta Medical and Surgical Journal.*

Sick Stomach.

Frequently we find sick people whose stomachs reject all kinds of nourishment until conditions follow that in many instances terminate fatally. In twenty instances in which we have heard the popular sick-bed nourishments prescribed and rejected by an invalid's enfeebled stomach, we have never known the simple saucer of parched corn, pudding, or gruel refused. The corn is roasted brown, precisely as we roast coffee, ground as fine as meal in a coffee-mill, and made either into mush, gruel, or thin cakes baked lightly brown, and given either warm or cold, clear, or with whatever dressing the stomach will receive and retain. Parched corn and meal boiled in skimmed milk, and frequently to children with summer diarrhea, will almost almost always cure, as it will dysentery in adults.

Dr. J. B. C. Gazzo of La Fourche, La., writes to the Med. & Surg. Reporter extolling the Cyprea shells found on the Gulf-coast of Louisiana, as a valuable remedy in opacity, albugo and nebula. He says: "It will prevent tumefaction and discoloration of the eye, and sooner than some other therapeutic agents, restores the transparency to the natural tissue of the eye. The manner of using it is to reduce the shells to a fine powder, and mix with equal parts of mur-

iate of soda. Allow pinches of this powder to fall upon the eyeball, after placing the head of the patient nearly horizontal. The powder is left to dissolve in the secreted fluids of the eye, and is applied thrice a day. The results obtained have been satisfactory, for the opacity of the cornea commenced disappearing after a few weeks, and sight has been restored, even after it had, for a considerable time, been lost. It has also been tried extensively in cornitis, with success when not entirely beyond the reach of cure, but time itself does much in such cases.

Dynamite.

R. Bender.—Dynamite, or one of its forms, is a brownish powder, without smell, and consists of 75 per cent. of nitro-glycerin and 25 per cent. infusorial earth. Nitro-glycerin was first prepared in 1847 by Sobrero, in Paris, and in 1862 was manufactured on a large scale by A. Nobel, and introduced as an explosive agent. It was first mixed with gunpowder, and increased its explosive power threefold. Soon after it was used alone as an explosive agent, with an explosive power sixfold that of an equal weight of powder. According to the nature of the substance used, as infusorial earth, chalk, sawdust, cellulose, coal-ashes, sugar, and the quantity of nitro-glycerin mixed with it, the explosive agent is called dualin, lithofracteur, colonial pulver, fulminalin, etc.—*Amer. Chemist.*

Formulæ for Treatment of Acne.

M. Rodet, of Lyons, prescribes the following treatment in acne. Friction is to be made every evening over the acne papules with the following: ℞.—Adipis, 5 drachms; sulphuris, acid tannici, aa, gr. viij. ad xv. M. In the morning the face is to be bathed with warm water, to which a little bay rum has been added, the proportion being increased from day to day until it amounts to one third. M. Doyen, of Lyons, recommends bathing with the following: ℞.—Hydrarg. bichloridi, gr. xxx; tinct. lavandulæ, f. ʒ ijss; aquæ distilæ, f. ʒ x. M.—*Am. Med. Jour.*

A Useful Vegetable Oil.

The French Consul at Canton has drawn attention to a tree the oil of which he thinks might be used as a preventive against the ravages of the phylloxera. The tree is the *Elæococca Vernicia*, and the oil it yields is universally used in China for protecting the wood of houses, ships, furniture, etc., from the pernicious effects of moisture and the ravages of insects. It renders any texture impenetrable, is a powerful siccative, and enters largely into the composition of the Japanese varnish.—*New Remedies.*

Syphilitic Pains of the Bones.

℞. Sulphate of morphia, sulphate of strychnia, each ½ grain; bromide of calcium, 1 drachm; syrup, peppermint water, each 3 fld. ounces. Mix. Dose.—A tablespoonful as needed. The plan has been to give the medicine three times at night, if the patient is awake and suffering, and as often during the day if necessary. Usually not more than one dose is required at night. —Dr. F. F. Maury in Med. & Surg. Reporter.

Injections of Chloroform in Sciatica.

A number of cases are reported of inveterate sciatica which had resisted all the usual remedies, in which deep injections of chloroform wrought rapid cures. The hypodermic syringe needle was inserted to its full length into the buttock or thigh, and from thirty to fifty drops of pure chloroform injected. None of the general effects of the chloroform or malaise were observed.—*Detroit Med. Jour.*

Vaccination on the Leg.

Dr. Désert has written quite a long letter for the *Mouvement Medical* recommending the practice of introducing the vaccine virus into some part of the lower extremity, especially where the individual is of the female sex, for in scrofulous persons the cicatrix is often very unsightly, and the arm has no advantage over the leg as a *lieu d'élection.—Louisville Med. News.*

Thirst.

When persons are feverish and thirsty beyond what is natural, one of the best 'coolers" is to take a lemon, cut off the top, sprinkle over it some loaf-sugar, working it downward into the lemon, and then suck it slowly, squeezing the lemon and adding sugar as the acidity increases.

Enlarged Spleen.

Dr. W. R. Putney writes to the Med.&Surg. Reporter that he had found no remedy compared to a mixture of equal parts of tincture iodine and camphor, given in six to eight drop doses, immediately after each meal, in a small tablespoonful of simple syrup. This is also a valuable combination in asthmatic complaints.

Antidote for Carbolic Acid.

As this acid is now so extensively used, it may be of some importance to make known the antidotes which have been proposed. M. Farrand advises the following: White sugar, fifteen parts; quicklime, five parts—forming a saccharate of lime.—*Dental Cosmos.*

Useful Receipts.

Analine Lakes.—Dissolve in 17½ ozs. of alcohol at 95 per cent. 150 grains copal and 15 grains magenta. Filter, and add dry white starch to form a uniform mass. Dry and powder. Other colors may replace the magenta, giving different shades.

Liquid Tartar.—Grey tartar or white argol, 10 lbs.; sulphate of soda crystals, 10 lbs.; dilute sulphuric acid, at 90° F., 6 quarts. Set it at 17° F.

Best Size.—Horn sloughs, 4 cwt.; boil for ten hours; strain and add alum and sulphate of zinc, in powder, 3 lbs. Stir it in well, and receive in shallow vessels, and cool.

Bleaching Soap.—Take a common soda soap, dissolve in little water, and salt it out. Add to it ¼ of its weight sulphite of soda, previously made into a paste with a little water, and dry the whole together. For use dissolve it in its own weight of cold water, and for every 2 lbs. of soap add ½ oz. liquid ammonia. When it has become a soft jelly dissolve in eight times its own weight of water.

To Hinder Tannic Acid Solution from passing into Gallic Acid.—Add a little carbolic or cresylic acid.

Fustic Carmine.—Powder morintannic acid finely, and rub with strong sulphuric acid. From the brownish-yellow solution a brick-red mass separates, which gives, with a little ammonia or soda, a splendid carmine solution. It yields a red lake with alum and a little soda, red lakes, differing in shade with chloride of tin and chloride of barium, and a cherry red lake with nitrate of lead.

Green Varnish.—Boil 15 parts of powdered resin in 18 parts of water in an iron pot. Add slowly two parts of soda crystals dissolved in 5 parts of water and boil again; add as much more soda in solution, and boil till all the resin has disappeared. Cool, and let it stand till quite clear. Mix the clear liquid with sulphate of copper in solution as long as a precipitate is formed, filter off, and dry. It dissolves in oil of turpentine, forming a fine green varnish.

Vegetable Bronzes.—1. Extract 10 lbs. Brazil wood in soft water, let it stand for eight days in an open vessel, when pour off the clear liquid into a clean vessel. Heat part of it and dissolve 5 lbs. alum therein whilst hot, and mix with the remainder. Let it stand for eight days, strain off the sediment, and preserve it as a paste. 2. Boil 10 lbs. logwood twice in water, and mix the solutions and evaporate down to one-half. Add 10 ozs. chloride of tin and strain through a cloth. 3. Prepare the logwood decoction as above; dissolve in it ten ozs. powdered alum, and add about 1. oz. bichromate of potash.

Gold Varnish (proof against air and light).—Digest 2 ozs. best garancine in 6 ozs. methylated spirit, of specific gravity 0.833, in a covered glass vessel, for twelve hours; press and filter. Make a solution of orange-colored shellac in similar alcohol, filter, evaporate it to a clear syrup, and color with the garancine as deep as may be desired.

Red Extract of Indigo.—Stir up extract of indigo, as free from acid as possible, in water so as to produce a dark-blue liquid, and add caustic soda lye at 31° Baume. There is formed a precipitate and a clear yellow liquid. Let stand for about 48 hours, and then add an excess of oil of vitriol at full strength. A deep red liquid is formed. No heat must be applied. If the alkaline liquor is only allowed to stand for 24 hours it dyes wool a violet.—*Chemical Review.*

Elixir Monobromated Camphor. (Dambier.)

Monobromated Camphor.	0.50	grammes.
Alcohol, 56 per cent.....	60.	"
Powdered Sugar.....	40.	"

Dissolve the sugar in the alcohol with the aid of heat, and filter if necessary; in the clear hot filtrate dissolve the monobromated camphor, and flavor according to taste. A tablespoonful of this elixir weighs about 20 grammes, and contains 0.10 gm., or 1½ grains of monobromated camphor.—*New Remedies.*

Cod Liver Oil Jelly.

The following formula, published by Mr. Pratt, of York, England, originated with Mr. Agnew, of Liverpool, and is highly recommended:

	Parts.
Ol. Morrhuæ.....	72.000
Sacch. albi.....	16.880
Acidi citric	0.600
Gelatinæ.....	2.760
Aquæ.....	7.560
Ol. essent.....	0.200
	100.000

Neuralgic Pill.

℞ Quiniæ sulphatis.....	gr. j
Ferri et potassæ tart.....	gr. ij.
Morphiæ sulph.....	gr. 1 24 ad 1-12 M.

Take every hour until an expected paroxysm has been missed.

Recommended by Mr. Gregory and Dr. Burdenell Carter, in periodic neuralgia, l. c., p. 121.—*New Remedies.*

EDITORIAL.

The subject of improving the air of Asylums, Hospitals, Schools, and Public buildings, where large numbers are congregated, as well as Tenement Houses, is at present so much discussed, and the means of accomplishing these results upon sufficient scale, so little understood or organized, that we are requested to call attention again to Dr. Wells apparatus for deodorizing by steam or compressed air, so successfully used in the Navy, in which any liquid adapted to this purpose can be employed. We tried very thorough and exhaustive experiments with the apparatus, and were fully convinced of the thoroughness with which it performs the work. The deodorizing compound floats through the air so subdivided, as to be imperceptible and travels to every part of the building, permeates the cracks and crevices, the very places where it is most needed.—In the next number we will give the results of our experiments.

We give considerable space this month, to illustrations of Wells & DuLuce's "Steam Fumigator," because we have on many occasions demonstrated its value and usefulness—not only in removing *odors* and disinfecting apartments; but in imparting a delightful perfume to a large building by simply passing one quart of Florida Water through it.

Dr. Wells' long experience as a surgeon in connection with the Navy and in city hospitals, fully qualifies him to speak authoritatively on the subject of disinfectants; and has led him to study the best methods of using them, in order that they might prove most effective. Aided by Mr. DuLuce's experience as a mechanic, his attention to this subject resulted in the invention of the apparatus, represented on pages 25 and 26.

Soon after they first brought this apparatus to the notice of the public, Dr. Wells was ordered to the Gulf of Mexico, to join the Squadron. We give an extract from a letter received from him.

"The Monitor "Terror" has been lying here a long time, and was full of roaches, vermin and foul odors from these and other causes. I fumigated the vessel with Bromo-Chloralum and it destroyed all the bad odors at once. It was a very difficult vessel to fumigate being divided off into small spaces by many bulk-heads. Dr. Cook, the Surgeon of the "Terror" was so well pleased with the "Bromo" that he made a requisition on the Department at Washington for some of it.

"I use it freely on board my vessel in the *"bilge-pantries,"* &c., and would not be without it, on account of its not only being a perfect deodorizer and disinfectant, but because of its odorless and non-poisonous character which is a great desideratum on shipboard. We have had no fevers of any kind as yet this season in the Squadron, and hope we shall not. All the Officers who have been using the fumigator, say it is just the thing for Vessels."

H. H. WELLS, M. D., Key West, Florida.

Neuralgia Treated by Brandy (Spts. Vini Gallici).

BY J. P. F. BRUNNER, M. D., TOPTON, BERKS COUNTY, PA.

Dr. J. P. F. BRUNNER attributes the success of the employment of brandy in a case of neuralgia of the anterior and posterior dental nerves of the superior maxillary. The neuralgia was caused from exposure to the cold, and increased irrespective of all treatment. In order to obtain sleep on a certain evening, I administered thirty-four (34) grains of opium before the pain diminished. The opium produced a medium narcosis, with subsequent nausea and vomiting. That led me, by request of the patient, to discontinue the use of opium and resort to some other remedy. The following evening I prescribed two ounces (2 oz.) of good brandy every two hours. A copious perspiration was produced during the night; the pain ceased after eight ounces (8 oz.) had been taken, and has not returned since.

Ergot in Hypertrophied Spleen.

KEWANNA, Ind., Feb. 19, 1877.

MESSRS. TILDEN & Co.:

Having examined the copy of your *Journal of Materia Medica* for January, which was thankfully received, and having tested your Fl. Ext. Ergot, formula of 1874, upon an inveterate case of hypertrophied spleen, I thought it my duty to report the same for publication in your journal.

On the 2d day of January, 1877, I was solicited by the father and husband of Mrs. H. A., aged 24 years, married, the mother of three children, to visit her, and upon a careful examination report whether or not she could be helped or cured. From her I gained the following history of the case: She was taken in October last with bilious intermittent fever, which lasted more than a month, and has never entirely recovered from its effects. Her former physician, an eclectic, a thoroughly stereotyped routinist, treated her with syrups and remedies of the most absolute character, and what her disease had not already done for her he very effectually accomplished. I tested her lungs with the stethoscope and percussion, but found no disease, her troublesome cough being caused by the pressure of a spleen of extraordinary dimensions. So large was it that the whole abdominal cavity, from the extreme left to the middle of the right hypochondrium, and from the umbilicus to the epigastrium, was occupied by its presence. I should remark here that her former physician was treating her for tubercular consumption, as he thought her symptoms indicated that disease. True, she had at two different times vomited blood, which greatly frightened him and which he used prompt measures to stop, thinking it came from the lungs, but in fact it came from the spleen through the stomach. On the second day I injected over the enormous spleen, with a hypodermic syringe, 3 ii of Fluid Ext. Ergot (Tilden's), full strength, and every alternate day, after reducing the strength of the Ergot, one-third, as it produced too much local trouble. After using the Ergot in this manner four days I found the spleen to be reduced one-half. I then gave her Syrup Grindelia Squarrosa, one teaspoonful every four hours, combined with tonics and gave Quinine and Val. Bismuth as an antiperiodic. As I found her in extreme prostration when the effects of the hypodermic injection of Ergot had partially subsided, I applied locally an unguent of Bromide Potassium Ext. Conium and Gum Camphor. As soon as the chills left her I gave as a tonic and alterative Idoform gr. i, Iron by Hydrogen gr. ii, which she is yet taking three times daily. This lady is now, and has been for three weeks past performing her own domestic duties, and very thankful that she did not die with phthisis pulmonalis. Respectfully, W. T. CLELAND, M. D.

A Complicated Case of Blood Poisoning.

BY E. R. MAXSON, M. D., LL. D., OF SYRACUSE, N. Y.

I was called, October 15th, 1874, to see a respectable lady of this city, about fifty years of age, for the purpose of examining, and, if I had a "reasonable hope of her improvement," to prescribe. I found her in bed, emaciated, her limbs drawn up and stiff, and her face, body, arms and legs covered with sores, some of which were raw, while others were covered with scabs, some of which were half an inch thick or more.

I learned that nearly two years before that time she had lost her husband, a very respectable man, of Consumption, with whom she had eaten, roomed and slept, being much disturbed nights, and taking her food with *great irregularity*, as well as having much care and anxiety during the last two years of his confinement.

Soon after the death of her husband, about two years before I was called, being much reduced in flesh and strength, she began to suffer, with what appeared to her, as a general rheumatic affection, "all over," as she expressed it, and in about six months a *vesicular eruption*, evidently the "*Rupia Escharotica*" of Bateman, made its appearance, consisting of *bullae* formed or rising upon a livid surface; smallish at first, but gradually and irregularly enlarging; containing a darkish opaque fluid and ending in ulcers, which spread, some of them, to the size of the hand, gradually deepening and being covered with a fetid sanies, as well as surrounded by a red, inflamed border.

Much of the surface was thus covered; some slowly healing, while others were appearing, as nearly as I could learn, during the year and a half before I saw her, some time during which her lower limbs drew up and became immovably fixed, and, as I supposed on examining them, *permanently*. And such, I suspect, had been the impression of two at least of the five or six medical gentlemen who had treated her during the time, and one of whom, the lady informed me, suggested "*mechanical appliances*" to try and straighten the limbs, to which she could not submit on account of the sores; while the other suggested that, "could the sores be healed, the flexor tendons might be cut, and thus the limbs straightened." And, from their appearance, I did not think strange of the suggestions of the medical gentlemen referred to.

Having a little hope, however, that her general condition might be improved, and that, possibly, the sores might be healed, and her condition so changed that others might not appear, as had been the order up to that time, and firmly believing that it was a case of *blood poisoning*, caused by exposure so long to the decaying matter from the lungs of her husband, together with care, anxiety, and the great *irregularity* with which she had taken, and was taking her food, modified somewhat by her *age*, I concluded to prescribe, and adopted the following treatment:

First—I directed her to take a reasonable amount of plain, nourishing, digestible food, with strict *regularity*, three times a day, and not a particle at any other hour; suggesting, as most suitable, *oat meal*, *eggs* and milk. And I have the best assurance that she ate "by the watch," as she expressed it; and have no doubt that it was *indispensable* to a favorable result of her case, as clearly appeared.

Second—To improve her appetite, and to aid in restoring the blood, I gave her two drops of the Tincture of Nux Vomica, with two grains of the Ammoniated Citrate of Iron, three times a day, after eating, in a little water, which evidently helped her from the first, as she remarked to me, in a few days, that she could "see better;" and having reason to think it aided digestion, as well as in restoring the blood, they were continued during the six months she was under my treatment, combined.

Third—As an *alterative*, I gave her half an ounce of the Compound Syrup of Sarsaparilla (made from Tilden & Co.'s Compound Fluid Extract), with eight grains of the Iodide of Potassium, three times a day, in a wine-glassful of water, which was also continued during the six months, and, as I have reason to believe, with good effect.

Fourth - To act gently upon the liver, and to overcome a slight constipation, an Improved Compound Cathartic Pill (Tilden's) was given at evening, when necessary, though comparatively few were required.

Fifth—For the *surface*, I ordered an infusion of wheat bran, with Castile soap, daily, to cleanse and soothe the *sores*, while these in turn were kept covered with an ointment of the Oxide of Zinc, about two drachms to the ounce of lard, to be renewed daily, after the washing; which was continued five months, with apparent good effect. But as the ulcers were many of them healed at this time, including the entire face, and as the remaining ones, comparatively shallow, did not readily cicatrize, I suspected and found, under the microscope, that *cryptogamous plants* had sprung from the sores, evidently by the germination of sporules, secondarily lodged, upon this very inviting surface. And, to destroy these *plants* and *sporules*, as well as to favor the healing process, a solution of about a drachm, each, of the Sulphate of Zinc and Tannin to the pint of rain water was applied by a linen cloth, twice a day, after washing with the infusion of wheat bran and soap, as when the ointment was used. This was applied the sixth and last month, during which the remaining sores healed rapidly, the skin assuming a natural appearance, except the scars which were left.

The *result* of this case was more favorable than I had dared to hope. Her flesh and strength improved from the first, as well as the sores; more healing, and a less number appearing; and this went on steadily to the last. The relaxation of the contraction of the flexor muscles of the lower limbs, rendering their position fixed for so long a time, was gradual, but perfect; allowing the legs to straighten and flex by the action of the muscles, as in health, being only weak, of course; so that at the end of five and a half months from the commencement of my treatment she was up and dressed for the first time in a year and half. She could not, at first, stand up, but she was soon able to stand, and then to walk, so that at the end of six months she was about the house, and has had no relapse.

Scrofulous Ulcer Involving the Tibia.

BY S. H. HUFF, M. D., ZANESVILLE, OHIO.

For a year past I have been using your Elixir "Iodo" in many cases in practice, particularly in the case of my wife, aged 48 years, who had a large scrofulous ulcer on one of her limbs, involving the tibia, of some eight years standing, suffering at times intense pain. So troublesome was it that it prevented her walking much or attending to her ordinary household duties. We had the best counsel we could meet with and about despaired of a cure. I chanced to meet with the Elixir

Iodo-Bromide of Calcium Compound, and after a thorough course with that, using a teaspoonful three times a day, I am most happy to say that she is cured. She can now walk any reasonable distance without fatigue. I regard it not only as an excellent alterative, specific in scrofula, but also a tonic, as it has greatly benefited her general health.

I have had occasion to give this article a trial in several cases of diphtheria in children. I used my usual remedy as a wash for the throat: Sulp. Zinc, six grains, Wine Opii, two drams, Aqua Rosæ, two ounces, once in three hours until the inflammation subsided; then used the Elixir Iodo, twenty drops in water, every four hours.

One case where there was enlargement of the tonsils, to an extent to make the breathing difficult in ordinary health. The same was pursued with relief not only from diphtheria, but relief from enlarged tonsils. I now regard it as valuable in its constitutional benefits to the patient. This disease is much more difficult to treat and more troublesome in its after-effects when the person is scrofulous. With the Elixir Iodo, all the poisonous material in the fluids is soon neutralized, and the patient makes a permanent cure.

Firwein in Ulceration of Bladder and Prostate.

BY X. T. BATES, M. D.

I have very recently used the Firwein in an obstinate and severe case of Ulceration of Bladder and Prostate, with most encouraging results. The patient at the time he came under my observation, had been under the medical care of several eminent physicians for a period of twelve months, during which time, with the exception of occasional indications of improvement, his condition steadily grew worse, and finally incapacitated him for any manual labor, and had so undermined his health that he had the appearance of one about to die. He was daily discharging large quantities of blood and pus in his urine; in the course of twenty-four hours, to perhaps one pint, very thick like gelatine, and extremely offensive, so much so that the disinfectant Bromo was needed to purify and freshen the air of the room; during the night and day, pain intense, sleep and rest obtained by suppositories, each containing of Belladonna, ½ gr. and Sulph. Morphia, ¼ gr. one administered every four hours. Micturition sometimes as often as every ten minutes, accompanied by great increase of pain over the region of the bladder and in the testicles. Examination per rectum disclosed enlarged and tender prostate; pressure upon bladder, however slight, produced pain; catheter introduced with difficulty; defecation very distressing, cachectic countenance, great debility and prostration.

Treatment consisted of tonics, alteratives, and stimulants, and daily injections of a weak solution of carbolic acid, grs. ii to ℥ j of water. Little or no impression made on the disease. I finally abandoned all treatment save the tonics, and daily injections, and substituted Firwein, holding in solution Pyro. Iron, gr. ii to ʒ i, with directions that one teaspoonful be administered four times daily; continued the injections, substituting for carbolic acid, permanganate of potash, grs. ii to Oj. Improvement soon manifested itself, and has steadily gone on to the present moment. Patient is now able to go out of doors, micturates less often, pain nearly subsided, blood and pus nearly checked, strength being rapidly restored, and the prospect now is that he will soon be able to relinquish all medical measures, and resume his work.

Firwein I believe is particularly adapted to mucous surfaces. It has given me general satisfaction in all catarrhal affections.

Elixir Iodo-Bromide of Calcium Comp. in a Case of Lupus.

[Continued from January Number.]

Dr. O. S. PAINE, *Surgeon St. Elizabeth's Hospital, New York:*

I mentioned in my letter a case of Lupus—Mr. PIERCE, of Kinderhook, N. Y., brother-in-law of Dr. WRIGHT, of this place—and herewith give you a letter from his daughter, concerning it:

"KINDERHOOK, March 18, 1874.

Some fifteen years since a tumor made its appearance, something like a wart, upon the nose a little below the eye. It commenced scabbing over, the surface about it became inflamed, and nearly all who saw it expressed the opinion it was *Cancer*, and urged an operation before the eye became involved.

A friend, a physician occupying a prominent position in the profession in New York city, pronounced it "*Lupus*," and did not advise local treatment upon a patient as old as he, unless it encroached upon the eye.

Within the last four years it increased in size, extending half over the eye and down the nose quite on to the cheek.

It seemed to be of a spongy, porous nature, puffing out; and when the scab came off, as it did from time to time, it would bleed profusely. The discharge from it at times was considerable, of a thin watery character, and offensive, so that one would notice the odor on coming into the room.

Two years since, at your suggestion, he commenced the use of the Elixir Iodo-Bromide of Calcium Compound, and continued it as directed (a teaspoonful three times a day before meals, applying the Solution at same time,) for eighteen months, when a change was perceptible; the discharge stopped, the inflammation subsided, it soon lessened in size, gradually dried up, and in less than six months from that time a change for the better was noticeable. The last scab came off leaving a slight scar only. The duct of the eye, which has been for a long time closed, has resumed its office. He now reads for hours together.

It is now some three months since the tumor disappeared, and there is no indication of a recurrence of the trouble. He is now seventy-nine years of age, and in the enjoyment of almost unbroken health. The case is regarded as marvelous at his advanced age."

Mr. PIERCE was for many years a resident of this place and an esteemed friend of our family. I naturally felt much interest in the case, and urged him to persevere, as it would require time, in a person of his age, for the system to be brought gradually under its influence, and to respond. I did not deem it prudent to advise large doses, only such as would be retained readily by the stomach. I also advised applying the Solution, or Elixir diluted, externally. Mr. P. carried out these suggestions faithfully, for he had faith, notwithstanding for a year he could not observe any change for the better, but reasoned intelligently that it was an achievement to hold it even stationary, with the chances of ultimate improvement, and so persevered until he was amply repaid by a decided change for the better,

since which he has made a steady improvement to a cure. This case illustrates the necessity of perseverance, as well as that time is necessary to a complete renovation of the system in such cases. Too many expect a cure in a month, which is impossible.

Yours truly, H. A. TILDEN.

NEW LEBANON, N. Y., March 30, 1874.

Severe Case of Scrofulous Swelling and Abscess of the Knee.

NEW YORK, 48 East 31st, St., Feb. 16, 1877.

MESSRS TILDEN:

I have just received the enclosed letter from Mr. Gates the patient you called with me to see a few weeks since. I first saw him last October; he was confined to his bed unable to move, with the most terrible leg I have seen in ten years of Hospital practice. I used the Elixir Iodo internally, and the Solution externally for months, and *nothing else*; you saw the result. I regarded it from the first a worse case than Mrs. Augustine's or any other I have ever seen, and was determined to test the power of this remedy. It has, I must confess, more than sustained my expectation. I certainly think he would have lost his leg had any other course of treatment been pursued. He is well and expresses his thanks as you will see. It would be well to publish his letter, for the benefit it might be in similar cases. Yours truly

O. S. PAINE, Surgeon in Chief, St. Elizabeth Hospital.

Letter from Samuel Gates, Esq.

NEW YORK, Feb. 15th, 1877.

Dr. O. S. PAINE:

My Dear Sir.—Agreably to a promise made you some time ago, I write you concerning my case and improvement. I suppose mine is perhaps one of the most rare cases met with by physicians in practice, and to you, sir, I am now indebted for a better limb than I have had since 1865. At that time (1865), I was confined to my bed in consequence of a painful swelling, upon the inside of my left knee: it grew in size and hardness from time to time, and to such an extent as to interrupt and prevent my attending to business for some months. The attending physician treated me for inflammatory rheumatism; the hard swelling, or induration of the parts always remained, even while the inflammation from time to time would subside; by wearing a bandage I was able to attend to business, but always with more or less pain and much inconvenience. Thus far I managed to get along with it until the 28th, of October last, when the swelling broke and formed one of the largest and worst ragged sores, mortal eyes ever beheld; it confined me to my bed. I sent for a physician who came, and upon examination he recommended me to go to the Hospital. as he regarded it one of the worst Scrofulous sores he had ever seen, involving the knee. I would doubtless have to suffer amputation, and if relieved would have a bad knee all my life. While considering what was best to be done, a friend of mine Mr. Henry Hildebrand, who is in the office of the New York Daily Times, called to see me and remarked that you had successfully treated a friend of his for the same, or a similar disease. I lost no time in sending for you. On an examination of the case you remarked that it was the worst case you had ever seen, but you believed it could be cured and the limb saved; and you then put me on large doses of the Elixir Iodo-Bromide of Calcium Compound, and used the Solution externally. The remedy increased my appetite and I gained strength; in a short time the sore assumed a better appearance and gradually improved, until now I am well. I can in a short time resume my attention to business. I consider that my life has been saved by your timely advice, and the use of this remedy, which from the hour of its first use gave evidence of being a specific in such cases. It is due to you and to Messrs. Tilden that I should express my most heartfelt thanks, to you particularly for your kindness and skill.

SAMUEL GATES, No. 6 Spring St., New York.

NOTE.

We called with Dr. PAINE to see Mr. GATES, and found a limb that gave evidence one could not mistake of having been a severe and malignant case. The swelling from description must have reached nearly a foot in diameter, with four or five deep ugly ulcers down to the bone, the one not healed was healing kindly from the bottom and nearly closed up, but enough remained to indicate the character of the others.

From this gentleman's description of suffering for years, and especially for months previous to his final prostration with it we are presented with really an extraordinary cure. The fœtor was terrible for a time, but the antiseptic action of the Solution entirly removed the odor and little was perceptible after a few days. Our readers will understand that Dr. PAINE employed no other remedy but the "Elixir Iodo," and Solution of same.

[EXTRACT from letter of G. M. COOPER, Esq., Crete, Neb., Feb. 1, 1877.]

MESSRS. TILDEN & Co.:

Gentlemen—"I feel that I was fortunate in having brought to my notice your new remedy, 'The Elixir Iodo-Bromide of Calcium Compound'. The bone of my limb was ulcerated considerably, to such an extent as to keep me in bed. I began to use the 'Elixir' in Feb. last and by the first of May I was able to ride out and walk with the aid of a cane. For the past four months I have been as strong and healthy as ever."

Bromo-Chloralum in Tooth Ache.

PRE-EMPTION, Mercer Co., Ill., Feb. 24, 1877.

I am happy to inform you, that a little raw cotton saturated with Bromo-Chloralum, pure, and inserted with the point of a lead pencil, has several times relieved, almost instantly, the intense pain of carious teeth.

Yours truly, REV. T. M. THORPE.

THE
JOURNAL OF MATERIA MEDICA,
A Monthly Journal Devoted to
MATERIA MEDICA, PHARMACY, CHEMISTRY,
AND NEW REMEDIES.

New Series.] APRIL 15th, 1877. [Vol. XVI.—No. 4.

Phosphorus—Its use in Medicine.

(Continued from February number.)

In small doses it would appear to stimulate the stomach; for patients tell us that it produces a sensation of warmth at the epigastrium, and that it increases the appetite. In this way it appears to favor nutrition; it likewise increases the pulse and the temperature. One disagreeable effect is the eructation of phosphureted hydrogen, but this need not occur if it be properly administered. It is chiefly noticed when given in a fluid form.

The general stimulant effects noticed are accompanied by increased cerebral activity and increased muscular power, which implies increased tissue-change. We find that it increases the action of the skin and kidneys. Under its influence also, the menstrual flow is often augmented. We are under the impression, too (though we do not find it noticed by writers), that it increases the biliary and intestinal secretions. Certainly, some patients cannot take it on account of its irritating the bowels. Phosphorus is eliminated chiefly by the kidneys. Probably a portion of it may also be eliminated by the alimentary canal, as in poisonous doses this is certainly the case, as previously mentioned. It certainly increases the excretion of phosphates by the urine; and we have observed clinically—a fact not noticed in books—that it removes deposits of urates, whether by improving the digestion or increasing the amount of water excreted, or otherwise, is worth investigating.

Having thus considered its general effects, we are prepared to glance at the various diseases in which phosphorus has been found useful, and the special indications for its employment.

If we were required to classify the properties of phosphorus under the old-fashioned terms we should say it is a stimulant and tonic, perhaps also analeptic, and in respect to each of these possessed of a general and special action. The term alterative would also have to be resorted to in reference to some of its supposed qualities. We shall, however, consider ourselves free from this kind of classification, though we shall follow it so far as to give some order to our observations.

First of all, then, in certain general chronic diseases attended by debility and wasting, phosphorus has been found beneficial. Here it is that phthisis, tuberculosis, and various cachectic conditions as well as the consequences of exhausting discharges, prolonged suppuration, hyperlactation, or overwork, may be considered. In such cases the hypophosphites have long been employed. These compounds have, in France, been extensively quacked as specifics for consumption and the reflex of that quackery has reached our own country. That in properly selected cases they may probably do good seems to be shown by the observations of Drs. Thorowgood and Risdon Bennett, but it is not improbable that the pure metalloid will be found to replace them often with advantage. As a rule if they disagree with the stomach they do harm, whereas when they appear to promote digestion and increase flesh they should be persevered with. When cod-liver oil seemed to be indicated it has sometimes been made the medium, but the taste of phosphorised oil is so nauseous, that patients often refuse to take it; and as it is desirable they should not be disgusted with their oil, it is better for the metalloid to be taken in pills during a course of the oil or its emulsion. In consumption, in struma, in rickets, in mollities ossium, and in other cases affecting the bony system, this treatment seems to have some claim to be considered analeptic as well as tonic.

As a diffusible stimulant, as evinced by its effect on the vascular and muscular systems, it has also been employed in cases of profound adynamia, and some continental physicians think it useful in the typhoid state, and others have resorted to it as a stimulant in fevers and pneumonia. Dr. H. C. Wood, jun., has seen it

act favorably in such cases, but we need further experience in these cases.

In diseases of the skin, Drs. Eames, Percy, and others have attributed to it a value which may, perhaps, entitle it to be considered an alterative. They have tried it in lupus, psoriasis, acne, and furuncular affections. Its analogy to arsenic has been sufficiently obvious to lead Dr. Broadbent into a speculation as to its uses in skin diseases—a good deal more to the purpose than his hypothesis about its value in leukæmia. It has long been supposed that in the exanthemata, when the eruption recedes, phosphorus promotes its reappearance on the skin and we have already shown that it stimulates perspiration.

On the glandular system its alterative or stimulant effects remain uncertain. Goître has been known to recede under its influence, and the same may be said of enlarged lymphatic glands, but other remedies are in such cases far more effective, and it is probable that those which have been benefited by phosphorus would have done just as well, or even better, under tonics, iodine, or cod-liver oil. Indeed, in not a few cases the phosphorus has been given in combination with these agents, and to them, very likely, most, if not all the effect has been due.

Tavignot in France, and Gioppi in Italy, have employed phosphorus in certain forms of cataract, and others have prescribed it in what they have called amaurosis, and Mr. Jabez Hegg has found it useful in atrophy of the optic nerve.

Diseases of the nervous system are unquestionably those in which phosphorus has the most claim to our attention. Here it claims a *rôle* which no other drug can pretend to pay. Here, doubtless, it acts as a nutrient as well as a tonic. Certainly it appears to be worth a trial in an immense number of cases for which, until recently, there was no resource except rest, fresh air, perhaps sea air, and phosphorised food; in cases of exhaustion of the nervous system, so commonly induced in fashionable life, it has no substitute, and it has favorable influence in organic disease, whether cerebral or spinal; of course, in all such cases it should not be tried in the acute stage, or in stimulating doses, which might be injurious. In chronic white softening of the brain, and in paraplegia following myelitis it has been prescribed with varying success, and may be given with iron when we have reason to believe that the condition of the nervous centres is anæmic. Dujardin-Beaumetz has tried it in progressive locomotor ataxia, and although he has not seen any cases cured he believes that some have been decidedly benefited. Bartholomew has used with benefit phosphorised cod-liver oil in paralysis agitans. Delpech has treated a number of cases of paralysis of various forms by phosphorus. The same author reports that it is of especial value in the peculiar cachexia wich affects the workers in india-rubber. He thinks that the bisulphide of carbon to which they are exposed acts as a solvent on the phosphorised brain fat, and that given as a medicine phosphorus may supply the loss. Turning to the peripheral nervous system, Dr. Anstie considers it of not much value in neuralgia, but others have met with great success, especially in intercostal and trigeminal. Those who look upon neuralgia as due to exhausted nerve power would naturally expect that phosphorus might relieve it. Mr. Ashburton Thompson now gives it in large doses, as much as one-twelfth of a grain, though he formerly employed small ones. It should be remembered that doses of one-thirtieth have set up toxic symptoms. In the nervous affections of the aged, accompanied with feebleness of memory, trembling, and cramps, it has been found useful. The wakefulness of aged patients which is often so troublesome, may often be rapidly relieved by minute doses. Full doses should never be given to old people. In cases of early decay of the mental powers it has been strongly recommended, as well as in cases of break-down from overwork. In impotence it has been empirically prescribed, as well as for various consequences of sexual excess. Acton and others have given it with marked success in the cachexia induced by masturbation. If it be combined with iron and care exercised in discriminating the cases, the effect in restoring mental vigor is often remarkable. It should be employed with caution, and never when there is any tendency to plethora, cerebral congestion, or hæmorrhage.

The dose of phosphorus, according to the textbooks of materia medica, varies from one-fortieth to one-eighth of a grain; but we consider the last much too high to be safe. Mr. A. Thompson prefers large doses, but we do not. In a case of accidental poisoning he gave as much as half a grain every twenty four hours for six days, and thinks this amount "not excessive." We do, and the numerous cases in which toxic effects have followed less doses support our opinion. We agree with Dr. Kirby that it is safer and more efficacious to give small doses repeatedly than to "surprise the system" with a large dose. We consider one-twentieth of a grain a medium dose; and from one-twentieth to one-fifteenth a full dose. If repeated it is wise not to exceed a quarter grain in the twen-

ty-four hours, and each dose should be taken with a meal.

Preparations.—The object being to introduce free phosphorus into the system, we should avoid all preparations which expose the phosphorus to oxidation during administration or after it has been taken. Solutions in oil are rather defective in this sense, and besides being extremely nauseous, they are apt to set up gastric irritation, and give rise to the formation of phosphureted hydrogen. Ethereal and alcoholic solutions possess these disadvantages also, and in consequence of their strength varying considerably with their age, are furthermore dangerous. Mr. Thompson says his tincture may be given in larger doses than other solutions—a proof, to our mind, that some of the phosphorus is precipitated in dilution, and therefore not taken at all. To give an ethereal solution pure, as some have talked of, is a safe method of detaining the phosphorus *somewhere* on its way from the bottle to the stomach. It is said, and rightly, that *solid* phosphorus should not be given; but Macnamara, in his last editions of "Neligan," showed that this observation does not apply to pills carrying the metalloid in solution. For this reason he advised suet as an excipient. The pill of the British Pharmacopœia should be rejected. It has been shown that it usually passes through the bowels unchanged. Those who have devoted themselves to the improvement of pharmacy have directed attention to the preparations of phosphorus. Among these we are glad to find some members of the profession, and it would be well if others were to follow their example. Tilden, of New York, and Dr. Kirby, of London, have both devised processes for the preparation of phosphorus pills, and Dr. Kirby's process is employed by his sons on a very large scale. Both these physicians have succeeded in converting a *solution* of *phosphorus* into a mass of such a consistence that it is easily (with proper excipients) made into pills. By Dr. Kirby's process this is done without exposing the phosphorus to oxidation, and it is so well held by the excipents, that it does not give rise to any local irritation in the stomach, and is not followed by eructations of phosphureted hydrogen. He has managed to effect this without allowing it to become oxidised. To accomplish this entails, we hear, much care and skill, as well as some danger, throughout the manipulation. Nothing can be easier than to make powdered phosphorus into pills, and we fear that most of the pills in the market are of this sort. Hence they are uncertain, and consequently dangerous. Other specimens are so hard and insoluble, that as in those of the Pharmacopœia, the absorption of the dose is altogether conjectural. We have not been able to meet with Tilden's pills in London, but we have examined some made by Messrs. Kirby, and found them to possess the qualities indicated. Any one can easily test these. Break up in the fingers and roll together half a dozen of these pills in a dark room, and they will be seen to be luminous, and the phosphorescence may be observed to be uniform throughout the mass. We have watched this for above an hour. Every time the mass is cut or broken, or indented with the nail—in fact, whenever a new surface is exposed, fresh gleams appear, and this phosphoresence is not in points, but uniformly diffused. The total absence of anything like particles of phosphorus is very satisfactory, and we believe that the method of preparing them must be as represented by dissolving the phosphorus first, and afterwards adding the excipients, so as to preserve throughout the process the advantages of solution. We could suggest formulæ for this; but the trouble and danger involved in the manipulation would prevent any one preparing them on a small scale. The leading London pharmaceutists dispense Kirby's pills, and these are always obtainable. Few care to incur the responsibility of attempting to make their own. These pills have the advantage, too, of dissolving slowly, do not irritate the stomach so much, and are believed by many with some degree of probability to be only completely dissolved in the duodenum, so that the free phosphorus mingled with the aliments, finds its way into the blood.

Phosphorised oil, in capsules, has also been tried, but with little satisfaction. Apart from the uncertainty of the amount they contain, and the difficulty of making them, the capsule envelope is itself liable to great variation, and seldom obtainable of good quality. In France Dr. Clertan has indeed brought the manufacture of capsules in the form of his *perles* to great perfection for ether, chloroform, turpentine, and other drugs. If disposed to try capsules we should certainly prefer his manufacture, but we do not think this form equal to that of pills.

Before closing, we are bound to advert to some published formulæ worthy to be spoken of as curiosities of pharmacy, except for the fact that some are dangerous. They pass from one book to another unchallenged and without comment, and authors, who we should have thought better informed on the pharmacy of phosphorus, have quoted them, though with what purpose, as they are practically useless, it is difficult to divine. Why perpetuate obsolete

prescriptions which are likely to do harm? We have met with some of these in which directions impossible to follow are given. Thus as late as 1873 we actually find this credited to *Burgess*, in a work on skin diseases:—

℞. Phosphorus, g. iij. to xx.
Almond oil, gtt. x. to lx.
Powdered acacia, q s.
Make twelve pills.

Dose: one twice a day. Use in lupus and syphilitic tubercular disease.

How many persons have been poisoned by this it may be difficult to say. Perhaps the difficulty of dispensing the prescription may have saved some lives, but we are astonished beyond measure to find a careful teacher admitting into his work a formula which is too defective to attempt to prepare. If by some means ten or twenty grains of it was got into twelve pills, most assuredly the person who took them would be *poisoned*. Twenty grains of phosphorus in twelve pills! !

A very similar formula was for many years a standing dish in Hooper's "Physician's Vade Mecum." In the last edition we are glad to see it omitted. With such formulæ floating about, we cannot be surprised that phosphorus acquired the reputation of being a violent irritant poison; but during the last few years it has been given right and left, and is taken just like any other tonic, and we hear nothing of poisoning, except in a few solitary cases in which it has been clearly proved that its dose was excessive or its preparation defective. *The Doctor.*

Ergot in Fibroid Tumors of the Uterus.

Dr. J. B. Crandall reports a case: Patient took three doses, 30 grains each, of fluid extract ergot during the day, December 20, 1875, at the suggestion of Prof. Byford, of Chicago. On January 11, following, "the patient commenced to pass from the uterus small masses of fibrous growths, ranging in size from that of a small chestnut to an English walnut. There were also portions of fleshy substance that came away that evidently belonged to a much larger tumor, as the edges were rough and uneven, showing they had been torn from the main tumor." Although the volume of the uterus was much diminished, the patient was directed to resume the ergot for a time, but Dr. Crandall thinks the cure was completed with the first three doses taken December 20. —*The St. Louis Electic Medical Journal.*

The Relations Between Pseudo-membranous Croup and Diphtheria, and the Value of Tracheotomy in each.

New York Academy of Medicine, Feb. 1st, 1877.

Dr. John C. Peters opened the discussion by giving a brief outline of the history of diphtheria in the United States. In the history of New England, by J. Joslyn, Gentleman, in the years 1638 and 1663, the malady was referred to under the general description, "fearful disease in the throat, which proved fatal in a short time."

In a history of New England, prepared by Morse and Parish in 1804, reference was made to a most extensive epidemic of "throat distemper" which occurred in the year 1735. Dr. Douglas's paper of 1735 was also attached to Caspar Morris's paper upon scarlatina. Bard described diphtheria in 1771.

In Vermont, from the year 1773 to 1777, it was known by the name, "malignant sore-throat;" in 1778 it was described as cynanche trachealis, or croup; in 1793 as malignant sore-throat; in 1795 as "anginal epidemic;" and in 1796 as ulcerous sore-throat.

In the latter year it was said that some cases exhibited a rash having a crimson appearance; in others there was no eruption; probably there was a mixture of scarlet fever and true diphtheria. In 1802 and 1803 it again appeared in Vermont, and was called the "throat distemper;" in 1810 it was referred to as "cynanche trachealis and rattles;" in 1810 and 1811 it was also described as it appeared mixed with a typhoid epidemic.

The number of deaths from croup and diphtheria reported in New York from 1856 to 1877, were as follows:

Year.	Deaths from Croup.	Deaths from Diphtheria.
1856	550	None.
1857	560	2
1858	478	5
1859	622	58
1860	599	422
1861	460	458
1862	685	504
1863	908	981
1864	754	734
1865	449	589
1866	257	334
1867	76	88
1868	542	277
1869	255	156
1870	421	308
1871	457	238
1872	675	446
1873	732	1,151
1874	594	1,665
1875	758	2,311
1876	527	1,750

In 1814, at Aqua Creek, Va., there appeared

an exceedingly severe distemper, which carried off entire families, and which was described as a violent sore-throat, attended with obstruction of the air through the windpipe.

The first case reported in the city of New York was by Dr. Willard Parker, at the New York Pathological Society, June 11, 1845. The speciment was accompanied by the remark that "the disease had prevailed extensively in the city."

On the 28th of Jannary, 1846, Dr. John C. Peters presented before the same Society a specimen of "diphtheritic croup." Drs. Markoe and Sabine also reported cases within those years. From that time, 1846, the disease was comparatively lost sight of, until a case was reported by Dr. A. Jacobi.

In the City Inspector's report for 1860 death had been attributed to diphtheria in 422 cases; but it was said that no case had been recorded at the office prior to 1857. It was also stated by the City Inspector that, in his opinion, it was not contagious, and was curable in a large majority of cases.

The first mention of pseudo-membranous croup was of comparatively recent date being made by Dr. Blair, of England, July 6, 1713, under the name "croops," which he described to be "a snorting at the nose, and a squeaking at the throat."

In 1755, Dr. Russell, of London, gave the distinguishing features between diphtheria and true membranous croup. Dr. Peters made further reference to the literature of croup and diphtheria, and the discussion was continued by Dr. Joel Foster, who regarded membranous croup and diphtheria as two distinct diseases.

Dr. Elisha Harris regarded diphtheria as a self-propagating disease, and that when its infectious attribute had became fixed in any locality it showed a tendency to persist, especially in the midst of ordinary civic conditions. It could not be expected, therefore, that diphtheria, although upon the decrease, would entirely disappear, even in the present year.

Dr. Rudolph Tauszky took the ground that the two diseases were essentially distinct, and that their quality could be easily demonstrated microscopically, macroscopically, and clinically.

The following characteristics of the membranous deposit in the two diseases were given, accompanied by drawings of the histological appearances:

The exudation in membranous croup consisted of fibrillæ, horizontally arranged and nearly parallel with each other, with slight interstices, which contain epithelia, mucous corpuscles with nuclei, mucous threads, a number of indifferent elements, and a few fat globules. The membranes examined were removed from the epithelial layers of the mucous membranes of the air passages of children suffering from croup; the membrane could be removed easily and without doing the least violence to the tissue beneath. The fibrillæ were the result of coagulated albuminates and changed epithelial formations.

The membranous exudation in diphtheria showed a distinct homogeneous framework, circularly arranged, forming nests filled with numberless joint and a few rod-like organisms, having all the characteristics of the so-called micrococci (not at all found in the exudation of croup), and which could not be made to disappear by the addition of glycerine, acetic acid, or sulphuric ether. The circular network was interwoven and infiltrated into the substance of the submucous connective tissue, from which it could not be detached without violence, and if removed left behind a bleeding surface.

The exudation of croup was colorless and of the consistence of fibrin, and could be partially dissolved by the aid of warmth, or the addition of acetic or hydrochloric acid. The structure of the exudation in diphtheria was looser, more easily separable after removal from the body, and like a substance containing albuminous matter undergoing decomposition, was turbid.

Dr. Tauszky maintained that in diphtheria micrococci might be found in all the organs of the body, having first entered from the atmosphere the local putrefactive process in the throat, and from there gained entrance to the system by means of the lymphatics. In that manner an additional poisonous element was added, hence the necessity for local disinfectant treatment, the object being to arrest the process of putrefaction, and destroy the animal organism. Dr. Tauszky gave an interesting account of the difference between catarrhal, croupous, purulent, and the putrescent or diphtheritic inflammation, and closed his remarks with a brief reference to the clinical features by which the two diseases were to be distinguished.

Dr. George Bayles remarked that the distinctive differences between membranous diphtheria and croupous laryngitis could be demonstrated better by every other symptom and condition than by such as were confined to mucous surfaces of the respiratory passages.

It was in the localized symptoms that no certain distinction could be formulated to the satisfaction of all pathological observers; that is, *localized* as far as concerns the naso-pharyngeal and tracheal surfaces.

There was a localization in another sense,

however, that would help to determine the real and radical differences existing between the two forms of disease, namely, *induced localization* of membranous deposits upon surfaces remote from those specifically affected, or destined to be affected. Upon surfaces artificially prepared to exude *liquor sanguinis*, diphtheritic pseudo-membrane might be looked for in cases of diphtheria, and naught but pure reparative coagulable lymph in cases of membranous croups, even when the laryngeal membrane of croup was at its worst in points of occlusion or mechanical obstruction of the respiratory passages.

To assume that croup had phases of character and degrees of intensity that altered its manifestations in so remarkable a manner without destroying identity, was simply to assume that croup or diphtheria, by whichever name it might be called, did not obey fixed laws of invasion, or of development; neither was it governed by any of the usual influences which obtained under certain and variable conditions, as of age, sex, locality, constitutional tendencies, infection, etc.

If common croup (that fleet evidence of nursery mismanagement) could become assimilated or pathologically associated with diphtheria, it would be because a "cold" had assailed a vitiated and depraved constitution, and had become the exciting cause of a croupous variety of diphtheria, the diphtheritic element being determined by the constitutional conditions previously prevailing. That would seem to be possible when we reflected that we could demonstrate the presence of diphtheria in the system even in the absence of the usual *throat* lesions, and even when from considerate treatment, or other reasons, the throat lesions failed to appear.

If, therefore, we were able to have croup without appreciable constitutional taint, either before or after the attack, and were able to have diphtheria without the laryngeal and faucial false membrane, and further, which would be admitted, if we were *not* able to have croup without the pseudo-membrane of the throat, and *not* able to have diphtheria without a constitutional involvement to some extent, however slight, why was it necessary, under any accepted system of pathological reasoning, to regard the two forms of disease as essentially and generically one?

To amalgamate the two diseases would be to multiply the pathological and histological difficulties in the case to an inordinate degree, while to award croup and diphtheria a reasonable and separate identity, and study them accordingly would doubtless be the right step towards acquiring a better knowledge of their real and independent natures.

Dr. Billington continued the discussion by replying to certain propositions submitted at the last meeting of the Academy, by Dr. J. Lewis Smith, in favor of the view that diphtheria was a specific, primarily constitutional disease.

I. The first proposition was that diphtheria resembled such constitutional diseases in having a "long incubative period in certain instances. A week might elapse after exposure before symptoms of diphtheria commenced."

Dr. Billington, in reply, remarked that although the interval between exposure and attack in diphtheria varied from a day or two to longer periods, the same was true of other diseases not recognized as primarily constitutional. It was true of gonorrhœa; but that affection was not therefore a primarily constitutional disease.

II. "Severe constitutional symptoms, lasting for a longer or a shorter period—perhaps for twelve hours—might be present before the appearance of the usual inflammation."

Out of several hundred cases of diphtheria observed by Dr. Billington, he had never seen one so early that some indications of local inflammation had not been evident. Diphtheria, however, as was well known, often appeared in the course of other diseases, both general and local—a fact not in accordance with the usual behavior of specific, primarily constitutional diseases.

The presence of diphtheria was so appalling that there was liability to fail in bringing to its observation that cool analysis of symptoms which was given to less formidable diseases. Dr. Billington believed that when a thorough analysis was brought to bear upon the disease the conclusion must be confirmed that there was no symptom nor set of symptoms peculiar to the onset of diphtheria. The invasion of simple catarrhal sore throat was often attended —sometimes apparently preceded—by rigors, fever, anorexia, nausea, headache, general pains, etc. Many cases of non-diphtheritic throat affection were attended from the first by marked constitutional depression. Those who had seen much of diphtheria must have met with grave cases of the disease, in an advanced stage of local manifestation, in which the general symptoms were so slight that no serious illness had been suspected.

III. "Early and repeated local treatment of the inflammation did not prevent the occurrence of symptoms of blood-poisoning in all cases of

severe type. Local treatment was to be used to prevent septic poisoning, but it did not prevent diphtheritic systemic poisoning."

Dr. Billington replied that there was no known treatment that would at once subdue the inflammation, even in simple sore throat. In diphtheria some days generally elapsed before the exudation could be finally removed. Opportunity was, therefore, always afforded for the absorption of poison. No known treatment that was safe and practicable could be absolutely disinfecting, even in favorable cases—only approximately so. Toxic absorption from the affected surface, in greater or less amount, was therefore inevitable in every case of diphtheria. It was therefore regarded as illogical to consider some of the morbid phenomena of diphtheria as due to this assumed primary systemic poison, and the sepsis only to local absorption.

It had been claimed by some that the sequel, paralysis, because it followed mild cases as well as severe ones, must be due to primary systemic poisoning. On that point Dr. Billington remarked, first, that the conclusion was in no way warranted by the premises; and second, that the features of that paralysis—beginning as it usually did in the velum palati, and being frequently accompanied by evidences of tissue degeneration at that point of commencement, according to recent observations—were at least as suggestive of a local as of a constitutional cause.

Because water often failed to extinguish fire, it did not follow either that it was a valueless agent for extinguishing fire, or that the most destructive conflagration had other than a local origin.

IV. "The state of the kidneys afforded evidence of a constitutional malady. In certain cases of diphtheria the urine was albuminous as soon as any of it could be obtained. This was regarded as a strong point in favor of diphtheria being primarily a constitutional disease, whether the local manifestation was a pharyngitis or a laryngitis, for the poison penetrates the system before it reaches the kidneys."

Albuminuria in severe cases of diphtheria, and in many mild ones, was a familiar fact. The question, however, remained, was that phenomenon the result of a primary systemic or of the locally absorbed poison? If the result of the former, it should exist at that stage of the disease which preceded the occurrence of exudation. It might be said that such was the fact in certain cases. Dr. Billington replied that such instances were the exceptions to the general rule. He believed that albuminuria probably existed in the pre-exudative stage of diphtheria in no larger proportion of cases than of simple catarrhal affections of the same degree of severity, and from the same causes. In confirmation of his own observations upon that point, quotation was made from Dr. Robert Bell, of Glasgow, in the *British Medical Journal* of January 29, 1876, as follows; "The presence of albumen in the urine must not be looked upon as a necessary symptom of diphtheria; as it often does not manifest itself until far on in the disease; and, on the other hand, I have often observed albumen as a concomitant of ordinary sore throat."

Dr. Billington said: "I believe that the true interpretation of all the clinical and pathological facts of this disease is that upon the basis of a catarrhal inflammation is developed locally, by some influence—whether tendency from within or irritation from without, whether organic or chemical, no one at present knows—the morbid process which results in the diphtheritic exudation; that from this *fons et origo malorum* are absorbed the specific and septic poisons or poison of the disease, diphtheria; and that to this absorption is due everything that is distinctive in its constitutional phenomena."

It was believed that by accurately separating the constitutional symptoms peculiar to diphtheria from those which were not so, we should find in nearly every case that the time, order, and manner of their appearance were precisely such as to confirm the truth of the above theory. The few exceptional cases of marked disproportion between the constitutional symptoms and the local affection might be readily explained by the fact that diphtheritic exudation might and often did occur in localities where it was not visible; or by another familiar fact, not peculiar to diphtheria, that in certain constitutional conditions there might be grave toxæmia by absorption from a trivial source.—*The Medical Record.*

Calabar Bean as a Lactagogue.

Dr. Munroe, wishing to restore the secretion of milk after it had disappeared from the breast for about three days, thought the dilating power of the bean might be made useful. He accordingly applied an ointment of the strength of twenty grains to the ounce, and washed it off carefully before the baby was allowed to suckle. After two applications, *the baby not having been put to the breast mean-while*, the milk returned in full flow.—*Charleston Med. Jour.*

A Word in Defence of Sugar-Coated Pills.

BY PROF. J. B. MOORE, PHILADELPHIA, PA.

The practice of sugar-coating pills has been for some time the subject of severe, and I think, unjust criticism, and it is with the view of trying to correct some of the errors which have gained currency among medical men by what has been said and written, that I have prepared this paper.

Having been constantly selling and dispensing sugar-coated pills and granules since the practice has to any extent been adopted, I claim that I am somewhat qualified by experience and close observation to judge of the advantages and disadvantages of the practice as it affects their therapeutic qualities. In all my experience in selling and dispensing, I might say many hundred pounds of sugar-coated pills, I have never heard of a single instance of complaint of their inefficiency or even tardiness of action, either from physicians or customers, which could, by any stretch of the imagination, be attributed to their saccharine investment.

The objections which have been urged against the practice of sugar-coating pills rest, I think, upon insufficient grounds, and cannot prevail with any force when the subject is properly considered in the light of practical experience. No arbitrary rule for general application can be made to govern the matter as to what pills should or should not be coated in extemporaneous dispensing. This must be left to the judgment of the physician or pharmacist, which judgment must be based upon the knowledge of the chemical nature, etc., of the ingredients composing the pills, and the circumstances under which they are to be employed. But I do contend that as a rule *almost all* pills which are to be kept more than a day or two, should be coated with something, sugar preferred when practicable, and more especially such as contain iodide of iron, or any of the ferrous salts of iron, asafœtida, etc., or any volatile or readily oxidizable substance. Very many substances are liable to change and to deteriorate by even a brief exposure to the variable hygroscopic conditions and other atmospheric influences, from which the coating *shields* them, and at the same time preserves the pill mass from that indefinite exsiccation and hardening which exposure would produce.

I think that all of the officinal pills, as well as the numerous popular pills, which the pharmacist is obliged to keep ready-made, such for instance, as the comp. cathartic, comp. rhubarb, Hooper's and Lady Webster pill, and pills of iodide and proto-carbonate of iron, quinia, etc., should, by all means, be coated.

The opponents of coated pills may say "let every pharmacist make these pills in small quantities, and renew his stock every week or ten days." But, I would ask, what is to become of the old stock that remains on hand at each period of renewal, and which may be the bulk, and, in some instances, the entire lot; must these be discarded and cast away, and a new lot prepared, to be treated in like manner? Yet this must be done if we wish to meet the views of some of the opponents of coated pills, or else the pharmacists must make their pills up freshly when called for, which, I can assure my brethren, would entail upon the already complicated and onerous duties of the pharmacist an amount of labor, trouble and real annoyance, which to be appreciated must be experienced. I have realized a foretaste of this by being called upon, on several occasions, to prepare single doses of comp. cathartic, Lady Webster and various other kinds of pills, by persons whose newly-formed and unfounded prejudices against sugar-coated pills made them obstinately refuse to take them.

If the practice of sugar-coating pills should be abandoned, I can assure both the medical profession and the public that they will have to use pills in a worse and more uncertain condition than they now have them in the sugar-coated form. And, unless my conceptions of human nature are very erroneous, the pill business would soon degenerate into a state of chaos and uncertainty, and the public would be served up with such a sorry set of pharmaceutical products in the shape of pills as to make them soon cry aloud for a return to the elegant and palatable sugar-coated pill, which has, for fifteen years, steadily grown into such unbounded popularity, not only with the medical profession but also with the entire public. How could they ever have attained this universal popularity if they had been insoluble, and, if insoluble, why was it not discovered long ago by medical men, who have been daily and almost even hourly prescribing them for years.

The use of glycerin in pill excipients is a very good thing as far as it goes, but it does not protect the pill from deterioration by exposure, nor does it shield the palate from the disagreeable contact of the "bitter pill." Furthermore, its hygroscopic character might, in some instances, render it positively objectionable, and in *no* case can it supply the place of good sugar coating in preservative qualities. It is, however, an excellent excipient to employ in making pills, when eligible, either plain or coated, and I understand that the majority of

our wholesale mannfacturers of sugar-coated pills use it.

The argument that some pharmacists use against sugar-coated pills is that the wholesale manufacturer shares with us a portion of our profits. This weak argument may carry weight with some who have no business to occupy their time, but pharmacists who enjoy a fair run of business can spend their time much more profitably in other departments than they can in freshly making single doses of all the various popular pills for five cents each, which is the maximum price that three out of five pharmacists could get, and I have no doubt that many would be compelled to prepare them for three cents per dose. If any pharmacist would charge ten cents for a dose of comp. cathartic pills, his unemployed and, perhaps, ignorant neighbor would charge three or five cents, and thus either take his customer or compel him to "come down." For people are influenced very much now-a-days by the charm of cheapness, and especially in little matters of this kind.

The most popular pills, in my experience, are the officinal compound cathartic pills. These are in constant demand, and are most generally sold by the single dose, and, to accommodate customers, I keep them always put up in doses of three, four and five pills each, of which I sell many doses every day, and for the last fifteen years have sold none in this way but what have been sugar-coated, and presume that out of every fifty doses sold forty-five are in doses of only three pills each, it being very rarely that doses of four or five pills are called for, and I can scarcely recall to mind a single complaint of their inefficacy. This I consider a good test of the merits of sugar-coated pills. If the coating interfered with their solubility or activity I would most certainly have heard frequent complaints, for the public are not generally very mealy-mouthed or at all backward in telling the pharmacist of his shortcomings, or of the lack of efficacy of any of his medicines. I also sell large quantities of sugar-coated Lady Webster's, compound rhubarb, podophyllin pills, etc., and I never hear complaints of their inactivity. It is pills of this character, which produce decided and sensible effects upon the system, that are the best test with reference to their solubility.

If purgative pills will dissolve, which are liable to be hurried through the alimentary canal by the increased peristaltic action produced by the smallest portion of the medical ingredient coming in contact with the mucous membrane of the bowels, how much more likely would the anodyne, alterative and other class of pills be to dissolve, which are liable to linger longer in their passage.

As a proof of the fallacy of the idea that sugar-coating diminishes or destroys the activity of pills, watch the steady and unwavering popularity of many of the proprietary pills, which are now, I believe, nearly all sugar-coated, such, for instance, as Wright's, Jayne's, Ayer's, Schenck's, Brandreth's, etc. Do you suppose for a moment, that if the coating of these pills interfered in the least with their activity, the proprietors would not soon discover the fact and at once abandon the practice. These men are shrewd and keep a steady eye upon their own interests, and offer to the great public their remedies in the most palatable and inviting forms. And if regular medical practitioners should insist upon dosing the public with uncoated, bitter pills, what would be the result? People who have hitherto been in the habit of using the various officinal and semi-officinal pills would buy and use in their stead some of the popular proprietary pills. This would be the natural sequence of the present crusade against sugar-coated pills, if successful.

Instead of abandoning the practice of sugar-coating pills I would rather encourage its more extensive adoption, and would recommend, if it could be conveniently done, the coating of all pills with something to conceal their taste and to protect them from atmospheric influence. If some facile and expeditious means could be devised by which the process of sugar-coating could be executed quickly, I would like to see it applied even to pills on the extemporaneous prescriptions of physicians, and thus shield the sensitive and delicate palate of the sick from the disagreeable taste and, sometimes, repulsive odor of nauseous medicines. I might, however, offer as exceptions to this rule all pills that are to be administered in diarrhœas, dysentery, cholera morbus, colic, etc., where immediate or the promptest action is required, and where a highly exalted state of peristaltic action exists. In such cases it is probable that a freshly-made uncoated pill might be preferable.

To many persons a pill is the most acceptable form in which medicine can be administered, while to others pill-taking is a very unpleasant task, and the idea of swallowing a pill is associated with the most unpleasant sensations, amounting, in some cases, to the utmost disgust; I have known many persons who positively could not swallow a pill. Some people always have to hold a pill in their mouths for some time, and it is only swallowed after the most strenuous efforts. This very

repugnance and disgust, experienced by many persons, in taking pills and difficulty in swallowing them, has been, in many instances, I have no doubt, engendered by their being compelled to take bitter and nauseous uncoated pills, whereas had they been sugar-coated, they might never have experienced the slightest difficulty in taking pills at any time.

If regular physicians wish to render their practice unpopular with the public and encourage and foster homœopathy, let them sanction and join in the recent opposition to sugar-coated pills, and continue to discourage the employment of other elegant and palatable forms of remedies which an enlightened pharmacy offers them.

I consider opposition to sugar-coated pills an unfortunate retrograde step, and as unjustifiable and unnecessary as it is injudicious and damaging to the interests of both medicine and pharmacy. I think it should be the aim of every pharmacist who feels a just pride in his profession, to encourage rather than discourage the adoption and perpetuation of any practice that gives elegance to his products and that renders his preparations as agreeable to the taste and as inviting in appearance as possible. The very appearance of a medicine may invite, or it may repel and excite feelings of disgust in the mind of a patient. Physicians should feel it their duty, as it most certainly is of paramount importance to their interests, to aid and encourage pharmacists in their efforts in this direction, by using and recommending such improved forms of remedies. I refer, of course, to legitimate and substantial improvements. I don't expect a physician to adopt and prescribe every new-fangled thing to which the pharmacist may call his attention, either personally, by circular or by sample, the real merit of which may be all in the label, the true composition being kept a profound secret and only known to the pharmacist himself, and the whole thing, perhaps, only a fraud and deception.

The more elegant in appearance and the more palatable medicines are the more popular the regular practice will become. It has unquestionably been, in a great measure, the disagreeable and repulsive doses of the regular practitioner, and the palatableness of homœopathic remedies that has given the latter practice such a foothold, and rendered it so popular among the most cultivated and refined classes of our population. It is not among the ignorant and poor that homœphathic practice has attained its greatest popularity, but it is with the more cultivated and refined, whose delicate and fastidious palates revolt at nauseous doses of regular medicine. It is this class of people who will employ that doctor who will give them pleasant remedies, even though they may not really have so much confidence in his skill, in preference to one who deals out to them nauseous draughts. To ascertain the truth of what I have said, inquire of those who employ homœopathic physicians, and I will guarantee that three out of every five persons will tell you that they were allured to the latter by their pleasant remedies. Mothers will tell you that their medicines are so nice for their children; that their little darlings take their medicines so easily. There is no coaxing and petting necessary; no throwing of their little pets upon their backs and holding their noses while they pour the nauseous doses down their little throats, and then witnessing their sobs and heart-rending cries, since they have employed the homœopathic doctor.

The physician who studies to please the palate of his patient, especially if it be a woman or child, does a wise thing, in that he fortifies himself in their confidence and respect to that degree that it would require some powerfully adverse circumstance to destroy. Many, many times have I heard ladies say, oh! I do like Dr. So and So so much, he always prescribes such pleasant medicines. Hence, I say to the medical profession, pause and reflect awhile before you fall into the fatal error of taking the backward step of opposing and discouraging the use of sugar-coated pills, which give so great a finish and so much elegance to this form of remedy.

The theory of insolubility of sugar-coated pills is, at first sight, a very plausible one, and therefore apt to be accepted by medical men as true, without their having taken the time and trouble to test its verity. And especially are such theories likely to gain credence and rapid currency when they emanate from prominent writers, or are heralded by any of the "Sir Oracles" of the profession. But generally such false notions sustain but an ephemeral existence; they may for a while, like the "will-o'-the-wisp," lead the unwary astray, but they cannot long withstand the sunlight of truth and scientific practical investigation, and,

> "Like bubbles on the sea of matter borne,
> They rise, they break, and to that sea return."

When a remedy or form of remedy is placed under the ban of suspicion, as sugar-coated pills have been, since the senseless tirade against them was started, it is apt to be blamed unjustly, and failure of therapeutic activity ascribed to it, which *may be due* to the de-

ranged condition of the system. The usual dose of the officinal compound cathartic pill may, in the same individual, at one time produce excessive action, while at another time it may be wholly inoperative. So with quinia and other tonics; they may at one time act with great precision, certainty and with magic power, while at another time, may be continued for weeks without any appreciable effect. This capriciousness and uncertainty of the action of medicines is a problem very difficult of solution. This lack of activity, or uncertainty in the action of a medicine may depend on some abnormal condition of the fluids and secretions of the stomach and intestinal canal; hyperæmia or vascular fullness of the mucous coat may retard or effectually prevent absorption, although the medical substance may be dissolved or digested, and in the most favorable condition for assimilation. Both the gastric and intestinal secretions are very much influenced also by the variable condition of the nervous system, even absorption or endosmotic action may, in a measure, be suspended or entirely suppressed by certain nervous conditions. This is evidenced by the almost entire suspension of digestion produced in sensitive persons by the sudden announcement of bad news or any powerfully depressing circumstance. Grief or great trouble of any kind in persons of a nervous and sensitive organization, may often produce an awful sense of weight and oppression in the gastric region after food, accompanied by depression of spirits, etc. Every nervous and dyspeptic person has, I have no doubt, experienced the truth of this.

(*Continued in next Number.*)

Opium Habit.

The opium antidote business has been sharply called upon to halt by the Cumberland Medical Society of Maine. They have caused a quantitative analysis of certain of these nostrums to be made, and report the results widely among the profession. One specimen, manufactured by Mrs. J. A. Drollinger, of La Porte, Indiana, was analyzed by Walz and Stillwell, New York city, who found it to consist of glycerine colored with aniline red, and to contain in solution 1.383 per cent. by weight of the sulphate of morphia—about seven grains to the ounce. The second was the preparation of "Dr. S. B. Collins; the great Narcologist of the Age," also of La Porte. The analysis of this was made by Dr. Henry Carmichael, Assayer of the State of Maine, and differed from the preceding only in the amount of the sulphate of morphia shown to be present, namely, 3.2 per cent. A teaspoonful (a dose frequently prescribed by the proprietor) would contain almost two grains of the morphia—nearly twelve times the ordinary medicinal dose.—*Proceedings Medical Society of the County of Kings.*

(*For the Journal of Materia Medica*)

Colica Pictonum, or Saturnine Colic.

By H. Roberi, M. D., Washington, La.

The preparation or manufacture of lead produces very singular effects upon those engaged in it, and the same effects are observable among color-grinders and painters, though not to so great extent. These effects constitute the malady termed "painters' colic," or sometimes "saturnine metallic colic."

The symptoms of lead-poisoning may be divided into three groups. 1st. As affecting the circulatory organs. 2d. As affecting the spinal column. 3d. As affecting the digestive organs.

The first class or group of symptoms is marked by a slow, thin and intermittent pulse, and pallor of the face, while the body becomes subject to a cardiac hyposthenia similar to that produced by an overdose of digitalis.

The second class is characterized by pain in the lumbar, umbilical and diaphragmatic regions, with spasmodic contraction of the lower extremities and retraction of the testes, indicating a lesion of the spine and medulla elongata. The abdominal pains do not pertain to the bowels, as is commonly believed, but to their muscular envelopment and to spasmodic contraction of the diaphragm. This is evident from the fact the pain is relieved by simple pressure on the abdomen, which would not be the case were the bowels themselves affected.

The third and last group of symptoms may be distinguished by constipation resulting from a spasmodic contraction of the abdominal muscles, the sphincter ani becoming involved and thus impeding dejection.

From these premises it is obvious that the term "colic" is improperly applied by professional men to poisoning of this kind, and that it is erroneous to consider the malady analogous to enteritis.

It being conceded that the pathological condition of the saturnine poisoning consists in hyposthenia of the cerebro-spinal, or cardiacovascular apparatus, it follows that opium, from its special adaptability to either, is the remedy indicated, and my own experience and observation satisfy me that it is the most reliable and efficient. Alcohol and the ethers are too transitory in their effects to be of much use.

The extraordinary tolerance of large doses of opium in this distressing malady is matter of surprise. None of the customary evil results appear, as is the case when administered in other diseases; the symptoms of saturnine poisoning quickly abate, and strangest of all, the fœcal evacuations are uninterrupted.

To the correctness of my views on this subject I can add the testimony of many learned professional men, such as Stahl, Brichteau, Giacomini and others.

(*For the Journal of Materia Medica.*)

Laparotomy in a Case of Strangulation of the Ilium.

By R. Menger, M. D., San Antonio, Texas.

Miss H. aged 22 years, had suffered for years from enteralgia, the cause of which was diagnosed by the attending physician as uterine colic.

November 2nd 1876, the patient fell suddenly sick complaining of severe griping pains through the whole abdomen, attended with vomiting and diarrhœa.

The following day the diarrhœa was checked, but the vomiting and pains in the lower part of the abdomen still prevailed. The pains increased by pressure on the right iliac fossa and along the colon transversum. No hard, intestinal tumor could be found, the temperature being most of the time one to two degrees below normal; tympanitis over the whole intestines; urine normal. Several injections of morphia diminished the severe pain and after using enemas of Ol. Ricini and warmed olive oil, a very small quantity of fæces was discharged during that and the following day. On November 5th no more dejections followed after administering the enemas, leaving no doubt that an obstruction of the intestines was the cause of the mentioned symptoms. Vomiting (without ileus) and tympanitis had by this time increased to such extent that laparotomy was indicated, and the operation was performed by Dr. F. Herff of San Antonio, Dr. Claessen of New Braunfel, and myself assisting. During its progress while the patient was under the influence of chloroform, ileus manifested itself and continued in a most disagreeable way until the operation was over. After opening the abdominal wall a large quantity of serous peritoneal exudation was present; the intestines, especially the colon ascendens, was highly enlarged with gas, and the vessels injected to the utmost. Close examination showed a strangulation of the intestines but it took some time to discover the exact locality. The processus vermiformis was found to be ulcerated and enlarged one-fourth beyond its normal size, its extremity mortified and attached by old adhesions to the fundus uteri. A part of the lower ilium (serosa) was similarly involved and so became strangulated, by reason of these adhesions.—But this strangulation was of a most peculiar kind, as the intestine was twisted several times around its own axle commencing from the adhesive part upward to the colon. How this intestine could so strangulate itself seems to me beyond the capacity of physiological imagination.

After separating the ilium from its adhesions and after extirpating the processus vermiformis totally on account of its hopelessly diseased condition, the intestines were restored to their normal position. The patient felt quite comfortable after the replacement and closure of the abdomen. Wind and fœcal matter passed an hour after in the natural way, although five hours afterwards the patient died.

The nosology of this case teaches how difficult it is to form a correct diagnosis in the beginning of intestinal obstruction, and to determine, as Menger remarks "whether the complex symptoms are due to a twisting or intus-susception of the intestines or are the result of indurated fœces or stony calculi."

Antiperiodics in Neuralgia.

In the London *Medical Times and Gazette*, February 3, 1877, Dr. C. R. Francis, Surgeon General H. M. I. A., commends large doses of quinine and arsenic in neuralgia. He goes on to say: "Quinine and arsenic are, of course, remedies to be used with caution; and the physician, before prescribing either in the full doses here advocated, will satisfy himself that his patient can tolerate them. The physiological action of arsenic is well known; and when the symptoms caused by it become distressing (although they may be controlled by a few drops of laudanum), the remedy should either be suspended or altogether left off. The effects of quinine are not uniform. Singing in the ears, with deafness and headache, are the most common, even after moderate doses, attended with, occasionally (after those that are larger), confusion of intellect, dimness and obliquity of vision, and sometimes a tendency to a (temporary) want of co-ordinating power in the extremities. Vomiting is now and then a distressing symptom. In large doses, quinine in some persons causes great and even dangerous prostration. As a rule, these effects, all of

which I have seen, pass off after a time. A certain amount of tinnitus, with deafness (and even slight headache), need cause no apprehension. Where quinine agrees with a patient, very large doses may be tolerated. I have given eighty grains in the course of twelve hours with the happiest result.

With regard to the mode of exhibiting antiperiodics, I would observe that a preliminary evacuation of the bowels is essential, especially where quinine is used. Constipation will, in all probability, prevent success; and the disappointed practitioner may be disposed to condemn the remedy, whereas, in truth, he has not used it *secundum artem*. I have always given the antiperiodic from half an hour to an hour (so as to secure its full operation in the system) before the expected attack; and in very obstinate cases a smaller dose after it, followed by still smaller doses during the interval between the paroxysms. Generally, however, the one prior dose has been sufficient, supplemented by subsequent small doses extending over a few days, to fortify the constitution. Arsenic should not be taken on an empty stomach. Where this organ is irritable, the antiperiodic, in similar doses, may be introduced with equal benefit by the rectum; but a more elegant mode is by hypodermic injection. This plan is more economical, too; five grains of quinine thus introduced corresponds to twenty grains by the mouth. For hypodermic injections the neutral sulphate, which dissolves readily in water (one grain to twelve minims), without the addition of any acid, should be employed; otherwise, if acid be present, troublesome boils may follow the puncture. Where large doses of quinine are swallowed, pills or confection are the best form; but if this be objected to, suspending the dose in water, or mixing it with a glass of sherry, is a convenient and agreeable mode of administration. When dissolved in acid the natural bitterness of the drug becomes intensified."

New Method of Curing Phymosis.

By Dr. G. De Gorrequer Griffith.

Some years ago a patient came to me with a very slight stricture of the foreskin. I did not then perform any of the usual operations, but dilated the aperture in the prepuce by means of a forceps something like the ordinary uterine dressing forceps. The pain was very trifling.

My next patient was a young schoolmaster who had contracted gonorrhœa or balanitis, or both together, I was unable to decide which, as the preputial orifice was so small that I could not see that of the urethra for some time, and till I had subdued the inflammation. Then through the exceedingly narrow opening in the foreskin I got a glimpse of the entrance of the urethra. It was of importance to him to get well quickly, as he was about to be married, but he had a very great horror of the knife. I cured his more urgent affection, and then proceeded to open up the os preputii; not as I had done before from the outside inwardly, but from within outward. Making the patient stand in front of me, I grasped the penis with the fingers of both hands, and partly by retracting the foreskin, partly by projecting forward the glans penis, I commenced this wedge-like dilatation, and soon had the satisfaction of seeing an area of surface around the mouth of the urethra. This procedure I repeated every other day, and in a fortnight the phymosis was quite cured, so as not to be likely to return. He married, and has become the father of two children; and, when I recently examined him, there was not even any approach to contraction; he has, in fact, remained perfectly cured. This patient had never before had any part of the glans uncovered except the very mouth of the urethra.

The third case came under my notice in July, 1876. The young man, eighteen years old, had never been able to get the skin back at all. He had just contracted a very severe discharge, attended with a good deal of inflammation and swelling. Having cured him of these, I then treated him for the phymosis, which was quite as light as in the second case I have recorded, and at the fourth sitting I had the pleasure of being able to uncover the entire glans penis. I had adopted the plan of making him inject some oil under the foreskin on each occasion previous to his coming to consult me. With this patient I used the recumbent posture, because the pain was more severe than in the former cases, but then the treatment was much more rapid. Under chloroform the dilatation might be even more rapid—effected, perhaps, in one, or at most, in two sittings. especially if we did not mind splitting the mucous lining of the prepuce; but I prefer producing no rent or crack, but simple dilatation.—*British Medical Journal.*

Iodine caustic is prepared by dissolving four grammes of iodine in eight grammes of glycerine. It is used in lupus by applying it once every other day, and covering the parts with gutta percha. This treatment is continued for several weeks.—*Toledo Med. & Surg. Jour.*

Subcutaneous Injection of Water.

Dr. Lafitte read a paper in the Medical Section of the Nantes Scientific Congress for 1875, on the subcutaneous injection of pure or distilled water as a means of relieving pain. He says he has found it most useful in many cases; he relates a number of cases, and states he has several times relieved the severe pain of acute rheumatism by these injections. He used water subcutaneously as early as 1872, and succeeded in immediately relieving pain in a woman who was suffering most acutely from lumbago. Eight grmm. of distilled water was injected, and the pain did not return. In cases of sciatica, supra-orbital and facial neuralgia, as well as in intercostal neuralgia and rheumatic affections of the joints, he has found water injected subcutaneously quite as useful as morphia. He says that the result is not always favorable, and that the pain frequently returns, but so it does after morphia injections. Dr. Lafitte never found that the hypodermic use of water caused local abscesses, as is the case with the subcutaneous injection of other substances. Water causes at first a burning pain, which soon disappears. About four grmm. is the usual quantity to inject. The injection, which is done in the usual way, must be done at the painful spot, otherwise it is useless; several ordinary-sized (3 ss) syringesful may be injected; after you have emptied one syringe, wait two minutes, if by that time the pain is not relieved inject another syringeful, and so on up to six, till the pain stops, waiting two minutes between each injection. Lafitte says he never found need for more than six syringesful, and that two or three generally suffice. Two grmm. of water was the smallest amount which proved beneficial, and to use more than ten to twelve grmm. is useless. Bad results from these repeated injections never occur.

Dr. Pillet speaks highly of hypodermic injections of water in lumbago and intercostal neuralgia. Dr. Lelut says that for the last three months he has used the pure water injections, with the best results. He relates how he came to use it. His servant one day upset the bottle containing his morphia solution for subcutaneous injections, and to conceal her clumsiness filled the bottle with ordinary water, Dr Lelut, not knowing this, injected the water into the thigh of a patient who was suffering severely from sciatica, and whom he was treating by the subcutaneous injection of morphia. The patient was astonished at the instant relief of the pain, and said: "What kind of a liquid is this you are using which causes me no uneasiness or no sickness at the stomach like the former?" Since then Dr. Lelut has used nothing subcutaneously but water.

Dr. Dresch praises the usefulness of this injection, especially in muscular rheumatism. He also tells of a case of osteo-sarcoma of the thigh in which he used daily sixty ctgm. of morphia subcutaneously, chloral, cicuta and other remedies, and where hypodermic injections of water succeeded in relieving the pain quite as well as morphia without producing the disagreeable constitutional effects of that drug. Dr. Dresch does not use simple water, but prefers peppermint water.

Dr. Burney Yeo, of London, says he found subcutaneous injections of water useful in relieving the pain of a patient suffering from thoracic aneurism.

Dr. Gorrequer Griffith has used these injections since 1868. He prefers warm water.

Dr. Richards, of Birmingham, also recommends it. He injects six drops of warm water at a time.—*Schmidt's Jahrbücher*, No. 5, Bd. 170, 1876.

Treatment of Angina Pectoris.

The London *Medical Record* takes from the Paris *Medicale* some remarks by Professor See, of Paris, on the treatment of angina pectoris. According to him this affection is not a neurosis, but an ischæmia, combined with pain. The treatment, therefore, should be twofold. As the pain, which, by its violence, can stop the breathing, can kill the patient in a few minutes, it is to that we must first address ourselves when called during an attack. To this end morphia hypodermically is the best, and the administration of it in this way should be continued, at least twice in twenty-four hours, until the attack has completely disappeared. The morphia not only acts by suppressing the pain, but it assists the circulation also, and thus directly addresses itself to the ischæmia, which stops the heart from receiving sufficient blood, causing it to lessen. Together with morphia injections, enemata of chloral should be given to the extent of two to three grammes.

While advising chloral, Prof. See cautions against the use of chloroform, which ought not to be used, owing to its tendency to paralyze the heart. Nitrite of amyl has no action as a sedative, but its effect to produce dilatation of the vessels may render it useful. Belladonna produces no effect, and the use of anti-spasmodics in a disease of such severity is absurd. Acetate of ammonia has a certain value as an

excitant of the circulation, and because it acts on respiration, but it is inferior in value to morphia. Although prejudice may sometimes render it desirable to use cupping, frictions and heat, they are really of no service. During an attack the use of the bromides is admissible, because they produce contraction of the blood-vessels instead of dilating them; but, like digitalis, they may be valuable during the intervals as regulators of the circulation. Arsenic, however much vaunted, does no good. Hydrotherapy is highly dangerous, either a return of the attack or cerebral congestion being results to be feared from its employment.

The Influence of Phthisis upon Children.

Amongst the numerous theses sent in this year for the Doctorate of the Faculty of Paris is one by M. F. Ortega upon the above subject. The essay is fairly summarized in the *Revue des Sciences Medicales*, and the following are amongst the chief conclusions arrived at by the author, as a result of investigations in ninety-five cases. Phthisis has in the first place a marked effect upon conception; thus the author only met with thirteen out of his ninety-five females who, after the commencement of pulmonary symptoms, bore more than one child, and a third pregnancy was very rare in such circumstances, although many of the women were multiparæ. In all these cases the phthisis was in the first and second stage, in one only it was advanced. In this case there was an abortion at the fourth month, and death shortly after. As to pregnancy, more than one-third of the cases aborted or were premature deliveries, and reckoning only those who had a tubercular history, in but one-half did the pregnancy last till full term. Phthisical mothers are moreover unable to suckle their offspring, for setting aside ten cases in which phthisis developed during and probably under the influence of lactation, only eleven out of sixty-four infants were suckled by their mothers, and these infants, healthy at first, soon showed signs of insufficient nutrition, and died with enteritic symptoms. M. Ortega's cases show also that pregnancy hastens the evolution of phthisis to a marked extent, delivery being rapidly followed by the death of the mother, although the first days of the puerperal state are generally marked by a considerable abatement in the pulmonary symptoms. Both pregnancy and lactation he regards as exciting causes of phthisis in predisposed subjects. —*Toledo Med. & Surg. Jour.*

Practical Hints in Treatment of Fracture of Femur.

Dr. Wight makes the following conclusion:

"1. We need not expect in all cases of fracture of the femur to give the patient lower limbs of equal length. In other words we can not always prevent the so-called *Shortening*. The number of shortened limbs can not be accurately fixed.

"2. In a certain number of cases of fracture of the femur the injured limb will remain shorter than the other—no matter what the treatment may have been.

"3. Excessive efforts persisted in to bring the injured limb down and make it as long as the uninjured one will sometimes fail, and are calculated to do harm; since the strong fascia of the thight offers great resistance, and since the injured limb may have been shorter than the other before the injury.

"4. If need be, complete relaxation of the powerful muscles of the thigh by etherization will enable an ordinary and admissible degree of extension and counter-extension to give the injured limb a maximum length: or extending weights gradually applied will 'tire out' the muscles; at first apply four pounds, then add to that four more pounds, then make the weight twelve pounds, now increase the extension to sixteen pounds, and in some instances make the extending weight twenty pounds, removing a certain part of the extension as may be considered necessary.

"5. The possibility of having the injured limb longer after treatment than the other must be recognized, and the most probable explanation of such a result must be given.

"6. These conclusions conform to the practice and agree with the results of the best surgeons.

"Finally, perhaps I ought to add, that the variation in the length and obliquity of the neck of the femur, incident to the age of the patient, may not occur during the same time and with equal pace in the femoral necks, and that this may be one cause in some instances of a difference in the normal lengths of lower limbs. At any rate it may be noted that there is a remarkable approach to an agreement between the differences in the length of normal lower limbs, and the difference in length of lower limbs, one of which has had the femur broken: only the average difference is somewhat greater in case there has been a fracture of the femur. But in general, the tendency of a fracture of the femur is to shorten the limb to which it belongs. And we may fairly

regard assertions of always having lower limbs of equal length, after treating fracture of the femur, as open to just criticism. Such assertions are calculated to put individual surgeons in peril of suits at law for malpractice when they do not deserve it; and they are, if found to be untrue, a sure means of throwing discredit on a useful and an honorable profession."—*Louisville Medical News.*

Dyspepsia from Liquids.

The *Journal de Medicine & de Chirurgie* for February, contains some clinical notes of Dr. Denos, at the "Hospital de la Pitié," from which we translate the following passages:

"In the normal condition liquids introduced into the stomach are absorbed almost immediately and do not remain there. There are certain morbid conditions, on the contrary, in which liquids remain in the stomach and bring on symptoms more or less severe. One form of dyspepsia in particular, called dyspepsia from liquids, gives rise to these phenomena. This form of dyspepsia, but little studied, makes itself known by a sense of uneasiness and of weight, especially after the ingestion of liquids. If the patient abstain from drinks, he suffers much less, and the pain is in direct proportion to the quantity of liquid swallowed by him. There exists in this condition a pathognomonic sign which consists in a splashing sound that can be heard at some distance, and which patients themselves often produce, and which can be perceived in all cases very readily, by applying the ear to the epigastrium, and giving the body a shake such as one would give in order to produce the sound of hippocratic succussion. This sound is produced only in dyspepsia from liquids, or when there is an obstacle to the passage of liquids, as in cancer of the pylorus. But in the latter case the general phenomena are much more grave, emaciation more marked, and in common the tumor can be detected by palpitation. It is highly important to diagnosticate this form of dyspepsia, because it is extremely painful and often prevents the patient from taking food, thus rendering it more serious than other forms which permit digestion notwithstanding more or less pain. Besides, there is scarcely any way of treating it but by prohibiting liquids for a time. The patient must be confined to meats, hashes, and semi-solid foods, but he must avoid soups. When the stomach has been subjected for a time to this regimen, it regains its functions little by little, and if it is continued long enough, the cure will be complete. Then the ordinary diet may be resumed. During the treatment, thirst must be warded off by all possible means, and we may at least stimulate the functions of the stomach by the preparations of nux vomica.

"In the painful forms of dyspepsia with predominant gastralgia, M. Desnos is in the practice of prescribing the following formula: ℞. Magnes. calc. gm. iv; chlor-hydrate morphiæ centig. j; to be taken in two doses. [About one seventh of a grain of morphia to a drachm of magnesia.]"—*Pacific Medical and Surgical Journal.*

Ergot in Diabetes Insipidus.

Having a case of this disease on hand, we at once put him on the fluid extract of ergot, teaspoonful every three hours. The patient was a carpenter, of good habits. He had noticed a marked increase in the amount of urine passed for a number of months. His appetite was failing, he was getting weak and melancholy, and was losing flesh. His urine was clear, no casts or albumen, specific gravity: 1004. On measuring the amount of urine passed in twenty-four hours, it was found to exceed four quarts.

Immediately on taking the ergot, there was a decided diminution in the amount of urine secreted. The frequency of his calls to the water-closet became steadily less, until reduced to the normal. His appetite and strength returned, and his flesh was restored.

The treatment was continued for about a week and then omitted. The urine becoming increased, the prescription was again filled. This was repeated a second time. It is now neally two months since the last dose of ergot was taken, and the patient seems as well as ever in his life.—*The St Louis Electic Medical Journal.*

New Method of Treatment of the Pedicle in Ovariotomy.

Kovacs (Orvosi Hetilap, No. 26, and Centralblatt für Chirurg., 1876, No. 35,) has in two successful cases of ovariotomy used the following method of tying the pedicle: After having made the section of the pedicle with scissors, he divided it into four parts and tied each artery separately with catgut. The hemorrhage being thus completely mastered, he turned back and sutured the peritoneum around the stump. He left a drainage-tube in the lower angle of the wound.—*Charleston Med. Jour.*

Monthly Summary.

On Anæsthesia by Chloral in Children.

According to M. Bouchut (Revue Médicale de Paris, September 25th), complete anæsthesia in children may be obtained by injections of chloral into the stomach, an effect which cannot be obtained in the adult subject. A child will easily take forty-five to sixty grains. A quarter of an hour after the whole dose is taken, the anæsthesia commences, and is complete at the end of an hour. The operation may then be performed on the sleeping child, who cries out without waking; sometimes moves a limb; then relapses into immobility; and when it wakes, about four hours afterwards, knows nothing of what has passed. At the Hospital for Sick Children, at eight o'clock the sister in charge gives forty-five or sixty grains, according to the age of the patient; and the child goes to sleep in about twenty minutes. The dentist comes at nine o'clock, and removes the painful tooth, or even two, if necessary. The child moans and moves without waking; then relapses into deep sleep; and, when it comes to itself, it is *minus* a tooth, without having felt any pain or seen the dentist. To those who know the pain of having teeth extracted, and the difficulties of their extractions in children, it is evident that chloral forms a valuable anæsthetic for the purpose.—*Charleston Med. Jour.*

A Petroleum Theory.

The formation of petroleum has been explained by Mr. H. Byasson, upon experimental grounds, as follows:—If a mixture of vapor of water, carbonic acid, and sulphureted hydrogen be made to act upon iron heated to a white heat in an iron tube, a certain quantity of liquid carburets will be formed. This mixture of carburets is comparable to petroleum. The formation of petroleum can thus be naturally explained by the action of chemical forces. The water of the sea, penetrating into the cavities of the terrestrial crust, carries with it numerous materials, and especially marine limestone. If the subterranean cavity permits these new products to penetrate to a depth where the temperature is sufficiently high, in contact with metallic substances, such as iron or its sulphurets, we have a formation of carburets. These bodies will form part of the gases whose expansive force causes earthquakes, volcanic eruptions, &c. Petroleum is always found in the neighborhood of volcanic regions or along mountain chains. In general it will be modified in its properties by causes acting after its formation, such as partial distillation, &c. Petroleum deposits will always be accompanied by salt water or rock salt. Often, and especially where the deposit is among hard and compact rocks, it will be accompanied by gas, such as hydrogen, sulphureted hydrogen, carbonic acid, &c.—*Chemist and Druggist.*

How Rice Should be Cooked.

F. B. Thurber, of New York, writing from Japan to the *American Grocer*, gives the following account of the Japanese method of cooking rice: "Rice is worth here from $1.50 to $1.75 per picul of 133 pounds, or about 1½ to 1⅝c. per pound; at first thought it seems as if there might be a profit to import it into the United States, but our duty of 2½c. per pound, together with freight, insurance, and premium on gold, bring it up to a figure where there is no margin. They do know how to cook rice here though, and for the benefit of grocers and consumers in the United States, I investigated the matter. Only just enough cold water is poured on so as to prevent the rice from burning at bottom of the pot, which has a close-fitting cover, and, with a moderate fire, the rice is steamed rather than boiled until it is nearly done; then the cover is taken off, the surplus steam and moisture allowed to escape, and the rice turns out a mass of snow-white kernels, each separate from the other, and as much superior to the usual soggy mass we usually get in the United States as a fine mealy potato is superior to the watersoaked article. I have seen something approaching this in our Southern States, but I do not think that even there they do it as skilfully as it is done here, and in the Northern States but very few persons understand how to cook rice properly. I am sure that if cooked as it is here the consumption of this wholesome and delicious cereal would largely increase in America."—*The Druggists' Circular and Chemical Gazette.*

Impotence.

Dr. J. A. Jessup, New York, replies to Hallerus, to employ general hygienic treatment. Five-grain doses of bromide of iron formed into a pill with extract of gentian, four times a day. Then, should there be considerable irritability, give twenty grains of bromide of potassium, in solution, at bedtime, each night. Enjoin abstinence from conjugal contact for a number of weeks.—*The Southern Medical Record.*

Tasteless Preparations of Iron and Quinine.

The Apotheker Rozsnyay, of Arad, Hungary, whose tasteless preparations of quinine have already proved of considerable value, has lately brought out two new preparations of quinine and iron in which the taste of the ingredients is equally well disguised. One is in the form of a powder, which can be kept on the tongue for several minutes without the taste of either the quinine or iron being in the slightest degree perceptible. The other is made up in the shape of pastils or bon-bons, of round, convex figure, 1·5 cent. in diameter and 7 mm. thick, with a sugary taste. An analysis by Dr. Hagar shews each pastil to contain 0·05 gramme hydrate of quinine (combined with tannic acid) and 0·059 gramme oxide of iron (in the hydrated form). Numerous cases are cited in which these pastils have been administered to children and young females, with the promptest and most beneficial results. For children of four to five years, one pastil every two or four hours was given.—*Chemist and Druggist.*

Hypodermic Injections of Potassium Bromide in Epilepsy.

Dr. L. Frigerio reports (Archiv. Ital. delle Mal. Nervosi) seventeen cases of epilepsy in which he found hypodermic injections of potassium bromide very efficacious, either in preventing the convulsive attacks or rendering them much less frequent. The following conclusions are based on these cases: 1. the hypodermic method deserves preference in the administration of potassium bromide, because it is free from gastro-enteric disturbances; because the remedy is more readily absorbed, and the expense is less. 2. The hypodermic injection prevents the accesses more promptly. 3. The action of the potassium bromide is more manifest, even when the disease has long existed. 4. In epilepsies of recent development the virtue of the remedy proves highly efficacious. 5. The subcutaneous injection of potassium bromide is not to be feared on account of local accidents, which are not frequent and are relatively slight. 6. The advantages, are in proportion to the danger so far superior that one may conscientiously trust to the method recommended in the treatment of epilepsy.—*Louisville Medical News.*

Action of Chloral on the Rectum.

It would appear that chloral is one of those agents which act with nearly as much energy when introduced in the rectum as when taken into the stomach. In a case of puerperal convulsions, to which we had been called in consultation, a solution of bromide of potassium with hydrate of chloral, which could not be swallowed by the patient, was injected into the rectum, with the effect of allaying spasm promptly and decidedly. It was repeated in the same case with excellent results. Since that time other trials of chloral as an enema have confirmed its value in this mode of administration. The quantity of thirty grains in two or three ounces of water will generally be sufficient for a single injection.—*The Druggists' Circular and Chemical Gazette.*

A Pleasant Solution of Sulphate of Quinine.

By Isaac Smith, Jr., M. D.

In many cases we wish to prescribe sulphate quinine, and to get a solution clear from turbidity is a *desideratum*. With aromatic sulphuric acid we get a passable solution, but the acid is often objectionable, if not absolutely contra-indicated. In practice, we find the spiritus etheris dulcis to be all that is desired. One ounce of it will dissolve about two drachms of quinine, giving a transparent solution. I am not aware that this solvent has been recommended. To those who have not used it, a trial will, I believe, be a success most agreeable to both patient and physician.—*Charleston Med. Jour.*

Hay Fever.

Dr. Brinton in Philadelphia Medical Society (*Med. Rep.*) says of hay fever, that "As it may come on at any time during the summer, the term hay fever is a misnomer; in susceptible individuals dust will cause the disorder at any season of the year. It is a neurosis connected with constitutional idiosyncrasy, dependent upon a cause whose effects are invariable and not susceptible of cure, the only means of relief being the removal of patients from the neighborhood of the irritant. He has never seen a case cured, and Dr. George N. Beard, the author of an excellent monograph on this subject, has expressed the same opinion."—*The Southern Medical Record.*

The United States Pharmacopœia.

We are in receipt of a pamphlet entitled the *United States Pharmacopœia and the American Medical Association*, in which are important and forcible reasons againts the proposition of Dr. Squibb for taking the work from the National Convention and placing it in the hands of the American Medical Association.

The Pamphlet will be sent to any Physician who will send his address and a stamp to Dr. H. C. Wood, 1631, Arch street, Philadelphia. *The Southern Medical Record.*

Sneezing to Promote the Reduction of Hernia.

Dr. Chas. Denison, of Colorado, reports in the *Virginia Medical Monthly*, two instances in which the reduction of inguinal hernia was effected by the aid of snuff. All the ordinary efforts by taxis having failed, the patients were set to sneezing whilst pressure and manipulation were used on the tumor. At each sternutation a portion of the contents of the hernial sac could be felt passing into the abdomen, until the extruded mass was entirely reduced.—*Pacific Med. and Surg. Jour.*

Hypodermic Use of Iron.

Huguenin administers iron hypodermically in cases of pernicious anæmia, when the alimentary canal refuses to perform its functions. He uses a solution prepared from 5 gm. each of pyro-phosphate of iron and ammonium sulphate, in 50 gm. of distilled water, and administers a quantity corresponding to 0.03 gm. (or 0.46 grains) of iron at a time. Very soon after the injection the skin becomes red, œdema and palpitation of the heart are observed; but all these symptoms soon vanish, and generally an improvement is noticeable.—*Pacific Med. and Surg. Jour.*

Pathology of Whooping Cough.

In the French Academy of Medicine (*Gaz. Hebdomadaire*, Jan. 12,) the theory was advanced and illustrated by morbid specimens, that whooping cough was due to the enlargement of the ganglions of the trachea and bronchi, pressing on the pneumo-gastric nerve and its laryngeal branches. Strenuous objections were however presented to this doctrine, the principle of which were—1, the glands are seldom found enlarged; 2, the rapid amelioration following change of air; 3, the intermission of the symptoms; 4, the contagiousness of the disease.—*Pacific Med. and Surg. Jour.*

Ergot in Typhoid Fever.

Dr. Dubone, of Pau, France, has recently related his experience in the treatment of typhoid fever by ergot. What next will this universal specific be credited with curing? He gave it to eight men and seven women. There were two deaths—the others recovered, through some were admitted into the hospital in the last stage of the affection. Now we should like to know if the ergot contributed any impulse towards a cure? If it did, then on what physiological principle? Typhoid fever is classed as a zymotic disease; the blood is contaminated with a special virus, and ulceration of the bowels is its constant and almost pathognomonic symptom. How would ergot meet such a case?—*The Southern Medical Record.*

Therapeutic Effects of Corrosive Sublimate in Blumorrhœa.

Dr. Leopold Bruck, of Buda Pest, states that he has found blumorrhœa urethræ, lasting as usual when injections are employed six weeks without complication, to be curable by the administration of corrosive sublimate. The discharge is profuse during the first two days, but subsequently becomes progressively less abundant and more serous; the sensation of burning in the urethra is bearable, and the chordee moderate. During the treatment, alcoholic fluids, coffee, and highly seasoned food must be avoided. Purgatives should be excluded, since they are unnecessary during the use of the sublimate. The remedy is apt to produce pain in the stomach and intestines, and if this occur its use should be omitted for a few days. It should not be given in cases of cardiac and pulmonary diseases. Dr. Bruck prescribes the sublimate in the form of pills.—*Centralblatt f. d. med. Wiss.*

Antibilious Purgative Powder.

The following preparation will be found very convenient and efficacious as an antibilious purgative to carry in your pocket-case, and not being disagreeable to the taste will be borne even by delicate stomachs. As it is very certain in its purgative action, there is little if any risk of salivation:

℞ Calomel.....gr. x.
Podophylin.....gr. v.
Loaf sugar.....gr. xxx.
Bi carb. soda.....gr. xij.

Triturate and div. in powders No. xx. One powder will usually operate, producing bilious discharges. By practice the physician using this powder may learn to dose it correctly, on the point of his pocket-knife.—*The Southern Medical Record.*

An Ancient Dram-drinker.

At a meeting of the Suffolk District Medical Society, the subject for discussion being the cure of inebriety, Dr. Ayer reported the case of a man who had been in the habit of taking his eleven-o'clock and four-o'clock dram daily since boyhood, and lived to the age of ninety-seven. This seems to favor moderate dram-drinking; but the old question still stares us in the face, how long would the patient have continued to live had he not taken his daily drinks?—*Louisville Medical News.*

For Asthmatic Paroxysm.

℞ Ether.....fl. oz. iss.
Tinct. lobelia.....fl. oz. j.
Tinct. opii.....fl. oz. ss.
Tinct. stramon.....fl. oz. ss.

M. Dose, a teaspoonful every one or two hours, until nausea is produced.—*The Southern. Medical Record.*

For Asthma in Intervals.

℞ Potass. iodid.....dr.iss.
Spts. ammon. arom.....fl.oz.j.
Tinct. belladon.....fl.oz.ss.
Tinct. cinch comp.....fl.oz.ij.
Aquæ menth. pip.....fl.oz.ivss.

M. S. Dose, a tablespoonful after each meal. —*Ibid.*

Gleet and Chronic Gonorrhœa.

As an injection in gleet and chronic gonorrhœa use the following:

℞ Hydrastin canadensis.....dr. ij.
Deod. tinct. opii.....dr. j.
Aquæ,
Mucilag. acaciæ.....aa oz. ij. M.
—*Ibid.*

Emulsion of Phosphorus.

℞ Phosphori..... gr. j;
Chloroform pur..... fl. ʒ ij.

M. Dissolve by shaking together in a bottle, Add

Ol gaultheriæ..... fl. ʒ ss;
Spts. vini gallici..... fl. ʒ iij;
Syr. acaciæ..... fl. ℥ vij.

M. Ft. Emulsio. Each teaspoonful contains 1·60 of a grain of phosphorus.

Alterative and Tonic for Chronic Pharyngitis.

℞ Potass. iodid..... ʒ ss;
Tinct. rhei..... fl. ℥ ij;
Syr. sarsaparillæ comp..... fl. ℥ iv.

M. S. Dose, a teaspoonful in water after each meal.—*Louisville Medical News.*

The following formula is valuable in chronic affections of the skin—also a fine alterative in subacute or chronic rheumatism:

℞ Iodide potassium.....dr. ij.
Fluid ext. stillingia.....oz. j.
Fluid ext. polk root.....oz. ij.
Syrup.....oz. j.

M.
Dose, teaspoonful three times a day.

New Formulæ for Perfumery.

Jockey Club.

Ext. jasmin	5	ounces
" orris	20	"
" musk	7	"
" vanilla	1½	"
Otto rose, virgin	1½	drachms
" santal flav.	1½	"
" bergamot	[illegible]	grains in
" neroli super	[illegible]	generally be

[illegible] *Druggists'*

Benzoic acid.....

Pure spirit, sufficient to make 4 pi[illegible]

In this, as well as in all the followin[illegible] **Quinine.** before adding the last portion of the [illegible] place as much of it with water as the [illegible] **phate** will bear without becoming milky, wh[illegible] **rbid-** vary from two to eight ounces or more. [illegible] **huric** addition will make the perfume softer. [illegible] **is**

Musk.

Ext. musk	1	pint
" orris	6	ounces
" vanilla	2	"
" styrax	2	drachms
Otto santal flav.	1	drachm
" bergamot	2	drachms
" neroli super	10	minims
" patchouly	12	"
" lavender (English)	15	"
" cinnamon (true)	6	"

Pure spirit, sufficient to make 4 pints.

Patchouly.

Otto patchouly	2	drachms
" santal flav.	40	minims
" rose virgin	40	"
Ext. musk	8	ounces
" orris	8	"
" vanilla	4	"
" styrax	2	drachms

Pure spirit, sufficient to make 4 pints.

New Mown Hay.

Ext. tonka	25	ounces
" musk	6	"
" orris	8	"
" vanilla	1	"
" styrax	1	drachm
Otto bergamot	1	"
" neroli super	15	minims
" rose virgin	10	"
" cloves	6	"
" lavender (English)	10	"
" patchouly	10	"
" santal flav.	1	drachm
Benzoic acid	1½	"

Pure spirit, sufficient to make 4 pints.—*Chemist and Druggist.*

EDITORIAL.

Diphtherine.

a portion of ten asked during the prevalence of could be felt the nature, cause, prevention, and the extruded disease were under discussion, why we *cific Med.* forth a chemical combination, that the Hypoderm ould avail themselves of, that would be Hugu y adapted to combat this disease. Our own in ca e as well as the concurrent testimony of emi- He ysicians, who have given this subject careful of and with whom we have conversed concerning is special remedial properties of *Oxygen* and *Chlorine* zymotic diseases, guided our course in investigating and experimenting as to the structural character of the membranous formations, and as to those chemical agents and combinations that would act upon it, with a view to invest the profession with a topical remedy that would subserve the purpose of an *alterative, antiseptic, tonic, stimulant* and *resolvent*; one that would not irritate the diseased surface, but exert a soothing influence, allaying the inflammation, and thus hastening the exfoliation of membrane, as it may be formed from time to time during the progress of the disease.

Such a preparation we have now to submit to the profession for trial, and it is proper to say that it contains the recognized remedial agents, as Iodine, Bromine, Chloric acid, Iron, Potassa, Soda, Aluminium, together with the largest possible quantity of Oxygen and Chlorine that can be chemically associated with them by the particular and peculiar method we have brought to our aid.

This preparation can be employed in place of Chlorate of Potassa, and Muriate of Iron, which are so generally prescribed for Diphtheritic throats, also Quinine may be added when desired.

It is now more than a year since we first prepared and submitted it to experimental use by a physician, in whose locality Diphtheria in its several phases has frequently prevailed as an epidemic. It has in his hands as well as others, produced results far more satisfactory, than those obtained by the use of the usual remedies alone or as usually combined, to an extent that justifies us in calling the attention of the profession particularly to it.

To this preparation we have given the name Diphtherine and shall at another time call attention to its use in other diseases.

As A TOPIC, dilute one part to four of water; and use frequently as a gargle for adults, and for children apply in the usual way to the mouth and throat, allowing it to pass down the throat and to be swallowed in moderate quantities.

Diphtherine.

Messrs. TILDEN & Co.:

I take pleasure in communicating to you my successful use of your new remedy DIPHTHERINE, in a very aggravated case of Diphtheria, which to-day I dismissed cured.

Was called four days since to see J. S., male-adult, who had been suddenly attacked the day before, and resorted to the usual domestic remedies, in the hope of obtaining relief, but to no effect. His condition rapidly grew worse. I found him in bed—severe headache, nauseated, unable to retain any nourishment, glands of neck largely swollen. Examination of throat revealed much inflammation and engorgement, and diffuse membranous formation, breath offensive, and great prostration.

I placed him on Diphtherine, diluted one part to four of water, with directions to gargle frequently. Constitutional measures, Bismuth, Pepsine and Quinine.

The following morning his condition was improved, and in the course of forty-eight hours the membrane came off entire, while the glandular swelling had largely subsided and the inflammation of the throat was markedly reduced.

I have never treated so aggravated a case, with such rapid progress towards a cure.

I cannot but express the belief that Diphtherine is destined to achieve results which will place it among the most efficient remedial agents which are now used to combat this terrible disease—diphtheria. Yours Resp.,

X. T. BATES, M. D.

New Lebanon N. Y. April 6, 1877.

Sugar-Coated Pills.

We have this month devoted much space to the *Pill question*, as it is one which is of importance to the medical man, and the subject is very ably and fully presented by Prof. Moore. For ourselves we have not considered there could be really any question in the minds of practical men as to the greater solubility and value of Sugar as a coating over any other article because it is an article used in the hourly affairs of a practice; we mean when pure sugar alone was used, for we have never allowed any other article to be combined with it, and doubtless much of the prejudice which may have come up, arises from the use, by some makers, or perhaps confectioner who may be employed to do the work outside, of *terra alba*, and other articles to harden the coat. We have always contended that it was much better to have a discolor occasionly than to do what some are known to do to prevent it, for even if discolored, they are as sightly and more soluble than many of the Gelatine Coated Pills.

The prejudice is due more to the unprincipled drummers who go from place to place and make the most reckless statements "of what they know;" and it would be very remarkable if they did not, with those who are unacquainted with such tactics, make an unfavorable impression against the particular makers who happen to be the objects of their misrepresentations.

So far as we are personally concerned we would as soon supply the Gelatine Coated as any other, and it has not a little surprised us, that many who are so ethical, *as to any thing that speaks* of a "patent" have not observed that they are using a "*patented Gelatine Coated pill.*" Be this as it may, the person who claims to have invented this wonderful method was once in our employment, and availed himself of our apparatus in many respects, and then wanted to be paid a large price because he had been fortunate enough to get, as he supposed, some exclusive rights to sell, which we should if occasion offers, very properly contest and expose, and which we might well dispute.

There is no reason and never was, why Gelatine Coating should be any more the subject of exclusive protection, than this or that peculiar mode of putting on sugar.

They like all new articles will likely have their day, for all the experiments that have been made point to so much time requisite to the swelling up of the coating, before dissolution begins, that already do we receive letters, expressing increased faith in Sugar Coated Pills.

Prof. Remington, Philadelphia, says "an examination of results show that the plain, uncoated pill is to be preferred in point of solubility, and *next in order the sugar coated comes*; then compressed, lastly gelatin-coated."

"The writer confesses to some degree ofsurprise, however, at the readiness with which the sugar-coating dissolved, for we have been taught to believe of late years that this was the great objection to them, but it will be seen that the coating was off in the quinine pills in three, five, eight and fifteen minutes, and whatever defect *existed in the sugar-coated pill did not come from the coating, but existed in the pill itself.*"

"The gelatin-coating, or more properly *glue*-coating, proved to be a disappointment."

"In several cases the coating refused to release the pill for many hours, and in some cases, even after standing, the liquid was not colored."

Prof. Remington found the Sugar coated Quinine Pill dissolved in half an hour—the Gelatine required over an hour.

Compound cathartic sugar-coated, dissolved in half an hour; gelatine coating took over two hours.

Dr. Yale in New Remedies, March, relates his experiments with similar results.

Sugar-coating dissolved in five or six minutes. Gelatine-coated was an hour before coating was removed.

Any person who has dissolved glue for any purpose and watched the process of swelling up to a spongy state before dissolution occurs, can apply the same difficulty and trouble to Gelatine-coated Pills—however if any one prefer them, we will supply them, and should have done so when the party referred to adapted our apparatus to them, had we not felt that they did not meet the wishes expressed by the profession for a pill immediately soluble.

Practical Notes of a Correspondence.

EDITORS JOURNAL MATERIA MEDICA;

The following is a correspondence which occurred some time since between Dr. B. H. Washington of Augusta, Ga., and myself which may be of some interest to the profession, viz:

Jack's Creek, Tenn., June 10, 1876.

Dr. B. H. WASHINGTON,

Dear Doctor:—I saw some time ago in the Nashville Journal of Medicine that you used Kerosene in preparing a liniment for Pneumonia, Pleurisy, etc., also pains of all kinds.

Will you please furnish me the formula of it? And as a partial return for your kindness I herewith send you the recipe of my favorite Liver Pill used in all forms of biliousness, for lying-in cases to clear the alimentary canal of the accumulations of pregnancy; and in fact whenever a laxative, cathartic or cholagogue is required by varying the dose. ℞ Leptandrin ʒ j; Podophyllin, Sanguinaria, Ipecac, Sapon. Cast. Ext. Hyoscyamus, Capsicum and Ginger *aa* grs. xv; Ext. Taraxacum

3 j; Ol. Cloves or Sassafras gtts x. Ft. Pils. No. lx. Dose ij-iv. Drop the oil on the Ext's, add about 3 j water and rub to the consistence of cream, then incorporate the powders, mix thoroughly and roll out.

Respectfully, &c.

HUGH HOLLIS, M. D.

In a few days I received his kind reply which is as follows, viz:

Augusta, Ga., June 12, 1876.

Dr. H. HOLLIS, etc.

Dear Doctor:—Yours of 10, inst. received to day,—in reply will give the following as a good formula for my liniment.

℞ Morphia Sulph.....grs x.
Gum Camphor..... ℥ ss.
Kerosene.....f ℥ viij.

Shake before using and always rub in freely, as a small quantity produces but a slight effect. For deep seated tenderness or inflammation, abdominal or pulmonary, it affords wonderful relief My son had a case of pleurisy a month or so ago, suffering terribly and in less than fifteen minutes after the liniment was used the patient was free of pain and had no return till next day—improved rapidly under the other treatment and made a quick recovery. In some chronic cases the morphine produces severe itching and may be omitted, but it is always best to use it if the patient can be induced to bear it. In inflammatory cases it may be applied every three or four hours and should at all times be freely applied and carefully rubbed in; it is excellent for sore throat, and it may be applied with great benefit in all neuralgia cases, but will not cure that disease: by the way let me suggest a remedy that will cure it.—My daughter aet. 8, had neuralgia for 20 months, every day from 3, 8 to 10 times and defied all the skill I could reach in this region; at last, having used water freely in my practice, I tried the wet blanket pack with success. Three applications stopped the pains, and for the last 8 months she has been growing finely and doing well. I had the blanket wrung out of water as hot as hands could bear, then spread on the bed-clothes, and when cool enough she was laid naked on it, wrapped up carefully and allowed to lie from 2 to 3 hours, and if asleep, longer; when taken out, the room should always be comfortable and the patient rubbed dry with warm towels. The blanket should not extend below the knees.

Your liver pill I have no doubt is a splendid thing; my experience has always been that many articles compounded properly, produced better effects than a few or single remedies.

I shall be happy to reply to your communications at any time. Yours Respectfully,

B. H. WASHINGTON.

Extract from letter of EDWIN A. CARPENTER, M. D., Baileyville, Ogle Co., Ills., March 19, 1877.

Messrs. TILDEN & Co.,

"I have been using your preparations in my practice for a number of years and have found them reliable in all instances. Cheaper medicines can be purchased, but I prefer a *good* medicine at a reasonable cost to an inferior preparation at less price. *Are not other manufactured goods dispensed from bottles bearing your name?*

The Elixir and Solution Iodo-Bromide of Calcium Comp. and the Bromo-Chloralum, are excellent preparations, deserving the confidence of physicians."

Letter from Dr. JNO. W. WILLIAMSON, Jackson, Tenn.

"Your Elixir Iodo-Bromide of Calcium Comp. I have been using since soon after its appearance, and after a practice of more than 40 years. I know of no Medical Compound superior or equal to it in its general applicability in the various morbid conditions of the system."

Extract from letter of Mrs. J. P. DIMOND, M. D., Cambridgeport, Mass., March 5th, 1877.

"Thinking that it must be gratifying to you to hear occasionally from those who are using your medical preparations, and the results therefrom, I write this. I think your preparations are far better than any others now before the public, especially the Elixir Iodo-Bromide of Calcium Comp., it works wonders. I use a great deal of it in my practice, in connection with the Solution and the Bromo-Chloralum.

Ulceration of the Bowels.

Extract from letter of Dr. S. B. Merker, No. 2423, Jefferson St., Philadelphia, Pa., March 30, 1877.

"Your Elixir Iodo-Bromide of Calcium has relieved my stomach, and is, almost I might say, rapidly curing me of ulceration of the bowels."

Ergot in Hydatids and Hemorrhage.

Dr. HOFF, of Zanesville, Ohio.—"I have used your Ergot of formula 1874, with great success, and desire to say it has no superior, and never fails.

Was called to see a lady last fall who had symptoms, of pregnancy, had had hemorrhage for three weeks before I saw her. I gave her the Ergot, it expelled a mass of hydatids that surprised me, and was the worst case I met with in 23 years practice, and fully recover. Physicians can depend upon it in all cases, its action never disappoints, and with relieved placenta it never fails me.

Hydrocyanate of Iron in Epilepsy.

Extract from letter of WM. EATON, M. D., Narragansett Ferry, R. I., March 19, 1877.

"I have been using the Hydrocyanate of Iron pills which I procured from you, in a bad case of Epilepsy, with astonishing success, affording complete relief after all other remedies had failed."

We are in receipt of many complimentary letters from members of the profession in widely diversified localities in reference to the change of form and enlargement of the *Journal*. This is to us extremely gratifying, as showing that our efforts to further the growth of medical and scientific knowledge are appreciated by those to whom they are of most concern. We append a few extracts from letters received within a few days past.

A distinguished physician of Buffalo, N. Y., writes as follows:

"I am more than pleased with the appearance, contents and typographical execution of the January number of the *Journal* (new series). I have always considered it one of the best of my list of periodicals, and in its present form a more welcome visitor than ever before."

Dr. ———, of Syracuse, N. Y.:

"The *Journal*, in its present form, meets all the wants of the practising physician."

Dr. ———, of Charleston, S. C.:

"The *Journal*, in its new dress, fully makes up for its delay in coming."

Dr. ———, of Louisville, Ky.:

"I beg to express my appreciation of the great improvement in the *Journal* in its present form. As a work of reference for the practising physician, I know of no publication that more fully meets his wants."

Dr. ———, of Portland, Me.:

"The profession owe you many thanks for your efforts in the past. The *Journal*, always invaluable in the past, now more than ever commends itself to attention."

Dr. ———, of Richmond, Va.:

"I am more than pleased with the change in form of the *Journal*. Both as regards quality and quantity of matter, it is a decided improvement."

Extract from letter of A. B. LANIER, M. D., Oliver, Ga. March 1st, 1877.

"Your JOURNAL is as indispensable with me as medicine itself in my practice. It is with pleasure I recommend it to my brethren in the profession whenever an opportunity offers."

Extract from letter of Dr. WM. W. WHEATON, Jackson, Susq. Co., Pa. March 1st, 1877.

"A very able and interesting JOURNAL."

Extract from letter of J. L. SPLAWN, M. D., Elmo, Texas, Feb. 26, 1877.

"It is a JOURNAL of importance to the profession and one that I think a great deal of."

Goss' New Materia Medica.

This new work is rapidly being subscribed for; a great many want it, and we hope the required number of subscribers will soon be reached. Let every one that desires a copy wait no longer, but send in your name and address at once.

All who have seen or read portions of the manuscript pronounce strongly in its favor. At the low price of $3.00, post-paid, none can afford to be without it. I assure you it will be very cheap, and well worth the price. Let us hear from you at once. Address Geo. H. Field, M. D., 1100 North Market street, St. Louis. *The St. Louis Eclectic Medical Journal.*

THE
JOURNAL OF MATERIA MEDICA,
A Monthly Journal Devoted to
MATERIA MEDICA, PHARMACY, CHEMISTRY,
AND NEW REMEDIES.

New Series.] MAY 15th, 1877. [Vol. XVI.—No. 5.

A Word in Defence of Sugar-Coated Pills.

BY PROF. J. B. MOORE, PHILADELPHIA, PA.

Idiosyncrasies of individuals, which may be unknown to the physician, may also dwarf the power of medicines and interfere with their physiological action and pervert their therapeutic effects. Opium, belladonna and other narcotic and anodyne remedies, when given to relieve neuralgic and other painful affections and to produce sleep, often produce effects diametrically opposite to what are expected of them. Calomel and other preparations of mercury, iodide of potassium, arsenic, the various preparations of iron, etc., are all conspicuous examples of a large class of medicines which often fail in exerting their normal therapeutic effects, which, if administered in the pill form, may be unwittingly and unjustly ascribed either to their age or to their coating. These, with many other circumstances well known to medical men, may interfere with digestion, absorption and assimilation, and conspire to render the action of medicines uncertain. Hence, to test the relative merit or activity of the various kinds of pills, it is absolutely necessary in order for the therapeutist to arrive at a just and rational conclusion, that he should take into careful consideration all the various disturbing causes which beset the action of remedies.

In consequence of the doubt and uncertainty created in the minds of physicians and pharmacists regarding the solubility of coated pills, several pharmacists instituted a series of experiments by means of artificial digestion, to test the relative solubility of the various coated and other ready made pills of the day. With the results of their experiments the readers of this journal, I presume, are aware. But the utmost all such experiments can demonstrate is the relative solubility of the pills under treatment in the artificial mixture in which they are digested or macerated. They cannot convey any definite or even proximate idea of the relative solubility of the pills when they are submitted to the natural process of digestion as it is conducted in the human stomach and intestinal canal. The conditions under which the artificial digestion is conducted are all so entirely different from those attending the natural process as to render comparison of results *entirely out of the question*. There is absence of the genial warmth and the muscular movements of the stomach and intestinal canal, and of the disintegrating influence of the constant agitation, trituration and the attrition to which the pill is subjected in contact with the particles of food, etc., usually present in the alimentary canal, and the powerfully solvent action of the various secretions not only of the stomach, but those of the entire mucous surface of the intestinal canal, all of which are so destructive to the integrity of the pill mass. These, we might say, are all wanting in the artificial process, and will ever render the latter, no matter how carefully conducted, nugatory and barren of even an approximation to positive or satisfactory results.[1]

The most valuable and most satisfactory experiments ever made to test the digestive power of gastric juice, both in and out of the stomach, were those made by Dr. Beaumont upon his subject St. Martin, in whom there existed, as the result of a gun-shot wound, an opening leading directly into the stomach, three inches from the cardiac orifice. From this opening, gastric juice could be obtained and the process of digestion inspected, which afforded Dr. Beaumont unusual opportunities for experimenting. In order to show the fallacy of comparing artificial digestion with the natural process, I shall here quote from one of the experiments of Dr. Beaumont as I find it recorded in "Carpenter's Principles of Human Physiology," page 424.

A portion of meat was submitted by Dr. Beaumont to artificial digestion, under the

[1] Dr. Dalton, in his "Treatise on Human Physiology," page 133, says, concerning the muscular movement of the stomach, that this "continuous movement of the stomach is one which cannot be successfully imitated in experiments on artificial digestion with gastric juice in test-tubes, and consequently the process under these circumstances is never so rapid or so complete as when it takes place in the interior of the stomach."

most favorable circumstances, with gastric juice taken from the stomach of St. Martin, which required from 11½ o'clock A. M. to 9 o'clock P. M. for complete digestion, while another portion exactly similar, was placed *in the stomach* of St. Martin at the *same time*, was, at *one o'clock* P. M., found "to be all completely digested and gone."

Thus, it appears that meat, when submitted to artificial digestion, even with natural gastric juice in its nascent state, taken directly from the living human subject, required eight hours (six times) longer for complete digestion than it did when submitted to the crucial test of the natural process, which demonstrates how fallacious and unreliable must ever be all experiments made by artificial digestion with artificial gastric juice.[1]

In many, if not in the majority of cases in which medicines are administered in the pill form, I believe there are actual physiological advantages derived from the slow and gradual solubility of the pill mass in the stomach and intestinal canal. This not only protects the often sensitive mucous membrane of the stomach from the shock which the sudden contact of the full force of the medicine might produce, but also allows absorption to take place gradually and more thoroughly than when the pills are freshly made and liable to be completely dissolved in a few minutes. Cathartics, particularly, are extremely liable in nervous and sensitive persons to irritate and sicken the stomach, consequently medicines of this class are often given, and are borne without discomfort, which, if administered in mixture or liquid form, would cause great distress and perhaps be ejected. The same is true of bi-chloride of mercury, iodide of potassium and many other substances which might be named that are of an irritant character. The truth of this is exemplified in the almost every-day experience of the physician and pharmacist. For the reasons here stated, physicians are not unfrequently in the habit of prescribing "old opium pills" in preference to those freshly made (see "Pil. Opii," U. S. D.); and if this be true in the case of opium, why should it not also be true in regard to many other medicinal substances. I believe that the fears entertained by some concerning the inefficiency and untrustworthiness of pills that are not freshly made to be more imaginary than real. I do not believe that there is any disadvantage in pills being old and hard if properly made, whether coated or plain, provided they have been properly preserved, and do not contain any ingredients liable to change or spoil by time and exposure. They may, perhaps, not dissolve quite so quickly as newly-made pills, but will dissolve more gradually and in due time, and be as complete and as thorough in effect and less liable to perturb the system. I have sold uncoated cathartic pills of different kinds, which I have kept on hand for years, and never found them less efficient than when they were freshly made. Slow and gradual solution throughout the digestive organs favors absorption by presenting successively fresh portions of the medicinal ingredients to the mucous membrane, and thus permitting them to be absorbed, particle by particle, through the whole course of the alimentary canal without irritating or fatiguing the organs; especially is this true of all tonic and alterative pills.

It is surprising what increased power remedies sometimes acquire when presented in small but successive fresh portions at a time to the mucous surface of the stomach and intestines. It is this frequent repetition of minute doses which gives homœopathy its success, when it derives any at all, from medication. We often see ipecac and other emetics and nauseants, as well as purgatives, produce excessive action when given in minute doses and repeated every hour or so, whereas five times the dose might be given at once without, perhaps, producing any sensible effect.[1]

It would seem that many pharmacists labor under the erroneous impression that digestion is conducted alone in the stumach, but this is a great mistake.[2]

Gastric digestion is only the first stage or commencement of the process. After a pill has been subjected to the solvent action and digestive power of the fluids of the stomach and the rough handling it receives from the muscu-

[1]Dr. Carpenter, in commenting upon these experiments of Dr. Beaumont, page 424 ("Carpenter's Principles of Human Physiology"), remarks that this tardy action of artificial digestion "is readily accounted for, when we remember that no ordinary agitation can produce the same effects with the curious movements of the stomach, and that the continual removal from its cavity of the matter which has been already dissolved must aid the operation of the solvent on the remainder."

[1]Dr. Dunglison, in his "Therapeutics and Materia Medica," vol. 1, page 168, well elucidates this fact by a case which he says the late Dr. James Gregory, of Edinburgh, was in the habit of relating in his lectures: "A boy was directed to take an ounce of Epsom salt, but having a strong objection to the taste of the cathartic, resolved to form it into pills with crumb of bread. On making the pills of an appropriate size, he found they amounted to three hundred and sixty, a number so near to that of the days of the year that he determinod to make it correspond entirely. Accordingly he divided them into three hundred and sixty-five portions, and took them all, one after the other. The effect was extraordinary. The most violent hypercatharsis was induced, so as to endanger his life. This was owing, probably, to the gradual and successive breaking down of the pills in the canal, so that particle after particle came in contact with the mucous membrane."

[2]Dr. Reese, in his "Analysis of Physiology," page 172, says: "A more complete digestion, in fact, takes place in the upper portion of the intestines than in the stomach itself."

lar movements of that organ,[3] if it is not dissolved, it then passes to the duodenum, where it meets with the secretions of the pancreas and liver and those of the villous coat of the intestinal canal, which, together with the gastric and salivary fluids which have passed the pylorus from the stomach intermingled with the chyme, forms a combination of greater digestive and solvent power than that of the stomach itself.[4]

From the duodenum it passes on through the remainder of the small intestines, and through this long and turbulent route of about twenty-five feet of intestinal tube it is subjected to the warmth and solvent action of the secretions and fluids of the canal and the attrition and peristaltic movement of the bowels, which promote rapid solution and disintegration.[1]

From the small intestine the pill passes into the large intestines, and even here it is confronted with fluids destructive to its entirety; for it is the opinion of some physiologists(see Kirk's and Paget's Physiology," page 199) that the cœcum also secretes an acid fluid similar to the gastric juice, capable of digesting substances which have eluded or resisted the action of the stomach and passed unchanged through the small intestines. If digestion and absorption did not take place to some extent in the lower portion of the intestinal canal, what would become of the excremental matter that would accumulate in the lower bowels of persons who suffer from obstinate and protracted constipation, who are sometimes for weeks or even months at a time without a passage, yet who diurnally take their usual quantity of food. The average quantity of excrementitious matter daily ejected by an adult is estimated by physiologists at from four to six ounces. There must certainly be some provision made by nature in the lower portion of the intestines for the solution, or reduction to an absorbable condition of the large amount of solid matter which would accumulate in protracted cases of torpid bowels. Of course, as is well known, about three-fourths of this matter is of an aqueous character, which may be gradually absorbed by long contact with the mucous coat of the bowels; but there must still remain, in some cases, a large bulk of solid and extremely indigestible matter, which must undergo a thorough transformation before it can be taken up by the absorbents, and which, if it should remain would produce great discomfort or even endanger life. This labor must be performed either by the fluids which pass down intermingled with the solid matter, or else by the secretions of that portion of the intestines themselves.

But even should this not be the case and such a fluid not be present, the pill, while sojourning here and in the remaining portion of the bowels, will nevertheless be subjected to the softening and solvent action of the parts, and the disintegrating effects of peristaltic action, while at the time absorption will take place, even from this remote region, and the medicinal ingredients will exert their therapeutic effects in a measure, if not to their full extent, because whenever a medicinal substance comes in contact with a mucous membrane or an absorbing surface, under favorable conditions, it will be taken up and exert its medicinal effects. This is illustrated by the effect of medicines and alimentary substances when administered per rectum, or when medicinal substances are administered per vaginam, or when applied to a denuded surface or injected into the veins or under the skin, or when absorbed from the mucous membrane of the air passages.

Thus we see that a pill finds no quiescent state or haven of rest from the moment it enters the cardiac orifice until it passes the exit gate of the rectum; and it would seem to me that a pill, whether coated or uncoated, new or old, would have to be insoluble indeed, to be able to stand the thorough trituration that it receives in the stomach and then to pass unchanged through the entire intestinal canal, a distance of about thirty-five feet. Therefore I would say that a pill that could run the gauntlet of such an ordeal deserves to escape. And what though a refractory pill should occasionally be found capable of such a feat, and " live to purge another dav," this would not warrant us in unqualifiedly denouncing the practice of sugar-coating pills, a practice which confers such a blessing upon the invalid. Because we discern a spot upon the sun's disc, that is no

[3] Dr. Reese, *loc. cit*, page 167, says: " When the food has reached the stomach it is subjected to a peculiar peristaltic movement. This is produced by the contraction and relaxation of the various fasciculi of the muscular coat; it causes a complete revolution of the contents, in every direction, and a consequent thorough trituration."

[4] " The fluid of the small intestines, which is compounded by the intermixture of the biliary and pancreatic secretions with the salivary and gastric fluids, and with the secretions of the intestinal glandulæ, appears to possess the very peculiar power of dissolving or of reducing to an absorbable condition alimentary substances of every class, thus possessing more of the character of a 'universal solvent' than either of these secretions has in its separate state." ("Carpenter's Principles of Human Physiology," page 482.)

In reference to the digestive power of the fluids of the intestinal canal, Dr. Dalton (*loc. cit.*, page 145) says: "Although the separate actions of these digestive fluids, however, commence at different parts of the alimentary canal, they afterward go on simultaneously in the small intestines; and the changes which take place here, and which constitute the process of intestinal digestion, form at the same time one of the most complicated and one of the most important parts of the whole digestive function."

[1] The process of digestion and conversion are probably continued during the entire transit of the alimentary matter along the small intestine, and at the same time the products of that same conversion are gradually being withdrawn by absorbent action." (Carpenter, *loc. cit.*, page 488.)

reason why we should at once extinguish that glorious luminary.

Since the hue and cry against sugar coated pills has been started I have heard a great many outlandish stories told concerning them by medical men. A friend of mine in one of our wholesale drug houses informed me some time ago of a physician in Chester county, Pa., who told him that he had in his possession a half-pint bottle filled with sugar-coated pills, which he had garnered, that had passed through the alimentary canals of his patients unchanged. Another physician, residing in this city, informed a friend of mine that he had found handfuls of sugar-coated pills that had passed from his patients unscathed. Now, I don't like to question the veracity of these gentlemen, but I am constrained to say that I don't believe these stories.

> "Lest men suspect your tale untrue,
> Keep probability in view."

I think that I would be safe in offering five dollars apiece for all the sugar-coated pills made by any of our reputable manufacturers that can be obtained and presented *under oath* as having passed the alimentary canal undissolved under ordinary conditions of that organ. I doubt very much if enough could be collected within a year in the United States to fill a half-ounce bottle. I really think that these over-zealous relic-hunters have mistaken cherry-stones for sugar-coated pills.

When the mucous coat of the stomach and bowels are in such an excited and irritable condition as is sometimes the case in diarrhœa, dysentery, cholera morbus, etc., peristaltic action may be so excessive as to hasten the passage of substances to such a gait that time might not be given for solution or perfect digestion to take place. Under such circumstances *it might be possible* for a pill, whether coated or uncoated, new or old, to pass through the alimentary canal undissolved. Under such conditions, even portions of food may pass whole or unchanged, which under ordinary circomstances would be very digestible. But these are exceptional cases, and even in such cases, I believe particles of *very digestible* food would be more likely to pass undigested than would medicinal substances, because such remedies as would be administered in such cases would be likely to, temporarily at least, control and restrain inordinate peristaltic action, so as to allow a pill to be dissolved when portions of food might pass unchanged.

I have, in another part of this paper, said that in the case of pills that were to be administered in diarrhœa, etc., or that were desired to act promptly, there might be some advantage in their being freshly made and uncoated, but I question very much whether there is actually any advantage accruing therefrom even in such cases. Observation and experience in the use of this form of medication would seem to indicate that this was *not* the case. During the whole course of my early experience in pharmacy, I had occasion to make large quantities of a pill composed of opium, camphor and capsicum. This pill with many physicians was extremely popular. It was considered almost a specific in diarrhœa, dysentery, cholera morbus, and during the prevalence of epidemic cholera it was used by a great number of physician of my aquaintance with the greatest success, in fact it was their sheet-anchor of treatment. These pills we used to make up in quantities of thousands at a time. This was almost before sugar-coating was thought of, or at least before it was introduced to any extent.

The excipient employed in making these pills was gum arabic and water, the most insoluble excipient that could be employed, and these pills were often kept on hand for months before they were used, yet no complaint was ever heard of their tardiness of action or inefficiency. One physician of my acquaintance, the late Dr. Wm. S. Latta, of near Parksburg, Pa., employed these pills very extensively in his practice. I used to prepare them for him in lots of from five hundred to a thousand at a time, which, under ordinary circumstances, would last him for a year or longer. Yet he never found these pills to lose their virtues by the petrifying hand of time, although they were used in diseases in which the alimentary canal is in the most sensitive and irritable state, and in the most unfavorable condition for solution, absorption and assimilation. This is not only my experience in the pill trade, but I have no doubt it has been the experience of thousands of other pharmacists who have had a long and large experience, and who have been observing.

This is the best kind of evidence of the power of the stomach and intestinal canal to dissolve pills that have been long kept and that are *uncoated*, while it speaks in thunder-tones in favor of pills that are *coated*; because if pills are found to be soluble and active that have been kept for years uncoated, how much more soluble would they be when carefully made and properly sugar-coated. Besides, whoever heard of frequent complaints, by physicians or any one else, of the insolubility or inefficiency of pills, either coated or uncoated, until this terrible "bug-a-boo" of insolubility of sugar-coated pills put in an appearance, not-

withstanding millions of boxes of the various proprietary pills have been sold for years and years, and thousands of pounds of officinal and semi-officinal pills, saying nothing about the mongrel varieties dispensed over the counters of pharmacists and from the offices of physicians all over the country. Many of these pills, both proprietary and those of regular pharmacy, had been kept on hand for years until, I might say, they have almost grown grey with age before they were found to have retained their pristine and youthful activity and energy, and no sepulchral voice was ever heard, or if at all very rarely, against their efficiency.

[*Continued in next number.*]

For the Journal of Materia Medica.

Sanitary Science.

BY E. L. BOOTHBY, M. D., HAMMOND, WIS.

"Felix qui potuit rerum cognoscere causas."

Knowledge is of two-fold value—Practical and Intellectual. The value of intellectual knowledge is due to its intrinsic truth. Pure love of truth is often the stimulus of scientific research, without other reward than the mental benefits derived therefrom, and the pleasure the pursuit of such knowledge gives the inquirer.

Scientific inquiry is of such absorbing interest, amounting to almost a mania in many, that the practical use to be derived from such knowledge is completely obscured. Scientific study is or should be for the purpose of correctly translating the laws of nature, that they may become better understood and be utilized for the improvement of mankind. It, scientific study, has however an exalted value in its application to art—or furnishing to man rules for a higher sphere of action.

Practical knowledge on the other hand does not mean the mere application of scientific principles to agriculture or mechanics, of that which may facilitate the manufacture of certain articles, or increase a certain crop, but it also means that which is a guide to man, a definite guide in the various circumstances of life, administers to his welfare, assists him to gain the largest possible results from the smallest force expended, enhances his pleasure and usefulness, improves himself and his brothers in all respects. Man was made for action. Being of an exceedingly complex organization, he is prone to derangements which cause mental or physical suffering, and ultimately lead to disease and death. Knowledge which tends to remove these derangements, remove or lessen suffering, thwart disease and prolong life, is *practical knowledge.*

It requires a skilled artisan to repair the breach made by disease in this complex organization, the human body, and often with the aid of the greatest skill the repair is simply a botch, compared with the former elegant structure. Fortunately however it is much easier for the artisan to prevent the breach being made primarily, than to repair ever so small a one when it once occurs.

By a due study and observance of the laws governing health, this can in the large majority of cases be accomplished.

Every person can, if he will, learn how to live, how to properly care for the bodily health, avoid disease and prolong a useful life. The study of these subjects is claiming the attention of the great and learned of all countries, where civilization has a foothold. Already is the morning light beginning to scatter the darkness and the glorious truths of the true causes of disease beginning to be diffused where, formerly, ignorance and darkness prevailed.

Intellectual knowledge becomes practical as we apply it to the recurring wants incident to life. All knowledge then may become practical in its results. This is what is necessary in the domain of Sanitary science—that the truth bought of Sanitary economy be received and treasured by the people to be used for their benefit—physical, moral and intellectual.

It has often been remarked that it was useless to try and improve the masses, that it was casting pearls before swine, that they are not improved, and will not improve upon what knowledge they already are possessed of, only for pecuniary gain—and that it was wasting time and money in the effort. We concede there is truth in this assertion, but not that there always will be. The time will come when the efforts of the few honest, unselfish men will be appreciated. Rarely if ever are man's acts in true harmony with his knowledge. But the more a man knows, especially of Sanitary economy, the nearer right are his actions. The more intellectual and better educated a community the freer from disease are they, the more of earth's comforts do they enjoy, and the greater effort do they put forth to assist fallen brothers.

One great reason why man who "*sees the right and yet the wrong pursues,*" clings to the old habit notwithstanding the mind is conscious of the proper course is because of a diseased brain, and that disease is of such a nature that no voluntary effort of the will can throw it off at once, it having become thorough habit, second only to nature. Habit being an education of nervous force, an artificial reflex action of certain nerves that they obey an outward command, without

the conscious knowledge of the individual, so accustomed has he been to obeying the command, no thought is given at the time the act is committed. To illustrate the force of habit, the old, oft repeated story of the soldier answers admirably: while carrying home a leg of mutton, he heard the old order of "Attention" given in a commanding tone, instantly the mutton dropped from his hand, and the true soldier attitude was taken without voluntary thought. Such is habit, when evil, a curse; when good, a blessing.

Intellectual education creates indissoluble associations of our ideas of things in a natural order of occurence. Moral education fixes the ideas of evil deeds with evil things, and good deeds with acts of benevolence, and things of pleasure and virtue. People need moral as well as intellectual knowledge, in order to become conscious of the right course and pursue the same.

This they will do when educated, may even do through the force of habit.

Not the mere study of books is what the world is waiting for, but a study of the wants of man, and of the application to those wants of that which will relieve them, and be of practical benefit, elevating in tone, and resulting in the improvement of the human race. The more forcibly the true thought is realized, the more perfectly understood, the more certainty of its being received as truth by the masses and profited by.

Therefore the necessity of a thorough education. Know well what you profess. Know better what you teach and know beyond the possibility of a doubt, that what you practice, is God's truth, that your example may be worthy of emulation. A mere theoretical knowledge of hygiene will be of little use unless we receive an income from it, use it for our physical improvement.

Disease can to a large extent be controlled by what knowledge we already possess of the principles of Sanitary science. Use the talent that we are already possessed of, that it may gain for us other talents, should be our motto. The more knowledge we can glean of the causes of disease, the more talents will we have to use that will exert a controlling influence over its rise and spread.

The ideas anciently prevailing in regard to disease were crude and unscientific. The ancients believed that the atmosphere was peopled with myriads of evil or unclean spirits, which entering the system caused the diseased state. They therefore invoked aid from their gods requesting that the unclean spirits might be cast out. Later in history it was Providence that sent disease direct to individuals as a punishment for some particular transgressions. Even in this comparatively enlightened day it is astonishing what ignorance and indifference are every where displayed, regarding the cause and cure of disease, and rarely do we find enough of those possessed of the proper education to scientifically assist in the mitigation and extermination of a severe epidemic of disease. Education pointing out the great responsibility resting upon them, must be an important factor in this reform.

The practical results of Sanitary science in this country where, with legislative assistance, it has become a part and parcel of the laws of the land, is of great value, though yet in its infancy, but is of comparatively small value when placed side by side with the same results in European countries, where the system has received governmental support. There the result has been astonishing in the lessening of the number of epidemic diseases, decrease of the death rate in more energetic and co-operative efforts, being annually made by the people as they begin to reap the harvest, the wonderful lessening of the cost of disease and death; nothing on earth is such a bill of costs as death and disease.

Physician's and Druggist's fees, though fabulous yearly in total, are but an atom when comparted with the total cost of disease and death.

The loss of valuable time, labor and its rewards, impairment of intellectual and mental vigor, and moral rectitude, compelling a withdrawal from active life and its enjoyments, the expenses of funeral, and the support of widows orphans, and those left destitute, furnish to our wondering senses a sum of such gigantic proportions that, without the support of reliable statistics it would be discredited.

A system, that will abate but a thousandth part of this enormous expense, will save fortunes yearly.

The aid of the people given to the true, good and intelligent physician, who labors for the good of his fellow man without hope of or desire for pecuniary reward, is necessary, in order to secure the benefits that may be reaped from a strict attention to to this great and important reform.

We must educate public sentiment where we find it uneducated, in order to have the sympathy and aid of the public. We must point out to them the inevitable results of violation of natural and physiological laws; correct their crude and unsophisticated ideas of food, clothing, ventilation, &c., &c; in fact bring them to an intelligent study of themselves. The great

Philosopher has said *"the proper study of mankind is man."* When this is begun to be studied with the Sanitarian principle, then will the steps be turned in the right channel.

Physicians of all ages have been battling with disease, and wrestling with gaunt death, and often have their efforts been powerless, for death held the first mortgage! Later, when the true idea of disease came to be better understood, a great and favorable change took place. The cause was discovered, it was removed; the effect disappeared as by magic.

Said Dr. Rush "oppose the very beginnings of disease," oppose it with a masterly knowledge of the cause on strict scientific principles.

Cholera, Small Pox, and other loathsome diseases, which formerly spread over vast tracts of territory, moving whither they would, cutting down their victims with a remorseless hand, removing the very bone and sinew of the land, have been shorn of their terror, and deprived of mortal effect in so great a degree that they are no longer looked upon with terror. By simple preventive means has this been accomplished.

Medicine saves individuals. Hygiene saves multitudes. Which is the more important study for man to pursue?

Bacteria, and What Will Kill Them.

In The Circular of January last was an article upon *Bacteria* by Prof. Tyndall, which presented a remarkable view of that microscopic vegetable in the production of the phenomena of fermentation. Below we present a short communication that appeared recently in the New York *Times*, which shows their wonderful tenacity of life, and what will not and what may destroy their vitality.

One of the most active and dangerous forms of bacteria, the micrococcus, is about the shape of the head of a small pin; or, rather, when magnified 800 times, it looks like this: o o o o o. Another, the true bacteria, or rod-like particles, are about the following size and shape: ⊂⊃⊂⊃.

But the principal point is to find out what substances or medicines will destroy them. Quinine will not, for bacteria will live and flourish on a solution of twenty grains to two drachms of fluid. Nor will camphor, for they live on a solution of thirty grains in two teaspoonfuls of fluid. For five days they were seen swimming about among the pieces of camphor, and increasing immensely in numbers. Ten drops of carbolic acid in two drachms of fluid will not kill them. They also flourish in a solution of tar, and will swim about for six or more days between particles of ten grains of calomel in two teaspoonfuls of fluid. One drachm of laudanum in two teaspoonfuls of of fluid filled with bacteria will only commence to benumb and kill them at the end of six days.

They lived for ten days in a solution of tincture of nux vomica in two drachms of bacteria fluid. Tannin is the first remedy which has a decidedly destroying effect upon them. It will kill them in two hours; and although they will come to life again after being frozen in ice, and boiled in hot water, yet they will not do this after tannin is applied. Chloroform seems to kill them, but they will come to life again. They will live in a solution of one drachm of chloral in two of water. A concentrated solution of copperas, or sulphate of iron, will kill them; also chlorine water, and dilute muriatic, sulphuric, and nitric acids. We may draw the inferences that quinine, calomel, and carbolic acid are useless in diphtheria. That opium, nux vomica, chloroform, and chloral are comparatively so; and that tannin, sulphate of iron, chlorate of potash, chlorine water, and the dilute mineral acids may prove the only really useful remedies.—*The Druggists' Circular and Chemical Gazette.*

Subacute Rheumatic Arthritis.

Dr. Irenæus S. Davis, (*Medical and Surgical Reporter,*) concludes an article on Subacute Rheumatic Arthritis as follows:—The treatment must aim to remove or abate the systemic vice which gives rise to the disease. Gradually, and with much hesitation, I have been led to look upon the iodide of iron as almost a specific for this purpose. The form in which I prefer to use it in these cases is in pills, made according to the formula of the United States Pharmacopœia for 1851, as follows:

℞ Ferri sulphat., ... ℥j.
Potass. iodid., ... ʒiv.
Tragacanth pulv., ... gr.x.
Sacch. pulv., ... ʒss.
Syrup, ... q.s. M.
Ft. mass., et in pil. No. xl div.

Two or three of these pills may be given after each meal. The iodide of potash has not, with me, proved nearly so efficacious in these cases as the preparation, nor have other forms of the iodide of iron. I always have the pills freshly prepared when wanted, and whether it is owing to this fact, or to the presence of sulphate of potash with iodide of iron, resulting from the double decomposition, or to some other cause, I cannot tell, but I have rarely met with a case of subacute rheumatic arthritis which was

not arrested by this treatment if used in the early stages. Later in the course of the disease the prognosis is not so hopeful, but still the same general plan of treatment is indicated, while it should be supplemented by measures addressed to special conditions. Most of the phenomena which are developed late in the history of the disease are really complications depending wholly or in part on reflex irritation, or on some inter-current cachexia or diathesis. Malaria and various neuroses are among the most common complications. All these are to be carefully searched out and appropriately treated. Neglected, they seriously aggravate the original disorder, and render a cure almost impossible. The inflammation of the skin and infiltration are usually of reflex or of neurotic origin. Many of the complicating neuroses are well treated by electricity, though it is at least doubtful whether this ever has any directly beneficial effect upon the disease itself. Occasionally surgical interference may become a necessary auxiliary to the general treatment, as, for example, in some cases of rigidity or anchylosis, great muscular contraction, or excessive superficial inflammation. When the pain is very troublesome the following liniment will often be found to give great relief:

℞ Tinct. iod.,.....
Glycerin.,.....aa ʒ j.
Linim. sapon. camph.,.....ʒ ij. M.

It is to be borne in mind that nearly every case of this affection is anæmic. Frequently they have the appearance of plethora, but a close observation will almost invariably prove that appearance to be deceptive. This deceptive appearance is generally caused by a fatty deposit, by no means indicative of a healthy state of the blood.

Another thing to be remembered is, that, though the disease be cured, the diathesis remains, and a new manifestation may occur at any time. The best prophylactic management consists in maintaining the highest possible condition of general health.

Case of Strangulated Inguinal Hernia Reduced by a Novel Method.

BY DR. J. HOLMES JOY, M. A., TAMWORTH.

Mrs. P——, aged 60, has been "ruptured" for seven years, and has regularly worn a truss. On April 19th, while working in the factory, she strained herself, and felt that the truss had slipped. A few hours later, she was attacked with vomiting and severe pain in the abdomen, when she called to see her medical attendant, Mr. A. M. Sculthorpe, at his surgery. He ordered an aperient and an enema, and desired her to go home to bed. At 2 P. M., on the 20th, he called to see her, and found the following symptoms present: She had constant vomiting, and complained of feeling faint and ill. The enema had been given, and had come away accompanied by but little fæcal matter, and the pain was not relieved. The taxis was now tried for upwards of an hour, but with no success; and, when he again saw her (about 10 P. M.), the pain and vomiting were present still, and the latter had become stercoraceous. The hernia was hard, as large as a walnut, and renewed and careful efforts to reduce it by the ordinary methods completely failed. I was now consulted as to the propriety of operation, as the symptoms had continued for thirty-six hours, and were becoming urgent. I suggested that, before resorting to an operation, trial should be made of cold applied by the ether-spray, and proposed, as an adjunct, if this should fail, inflation of the bowels by means of a common pair of bellows. After raising the patient's hips on two or three hard pillows, and leaving the shoulders low, the taxis was again tried unsuccessfully. Mr. Sculthorpe now applied the ether-spray, which quickly blanched the surface and emptied the part of blood. I now made trial of the taxis, and after some time, a small portion of the sac's contents returned, but the greater part was quite immovable. The bellow's point was then well oiled and introduced *per anum*, and the application of the spray and taxis was renewed. The bellows (not being double-action) required to be withdrawn and filled again. On the fourth bellowsful being pumped slowly in, the bowels were much distended, and, by careful pressure and manipulation, the hernia was reduced. It was of the oblique variety, but had become (apparently) direct from age; and the size and hardness of the sac-contents rendered their return by pressure on the outer side, unaided by the traction from within, impossible. This traction was supplied by the inflation of the bowels, while at the same time the hernia was reduced in size by the extreme cold (which the ether-spray produced) depriving the parts of blood. The idea of the ether-spray for such a purpose is probably not new, and would naturally suggest itself to any one. Inflation, I believe, is often used in France, and several years ago, I remember reading of a case in which it was had recourse to in this country; but I have never seen the combination of the two, and, in the case I have detailed, I believe that either by itself would have been successful. This belief induces me to publish this

brief notice, hoping that some other patients may possibly be saved a difficult and dangerous operation by these no less rational than simple means of treatment.—*The Boston Medical Journal.*

Otitis Media.

Mr. T——, of Mississippi, student at Vanderbilt University, consulted me October 18th, 1876, for a running at both ears. He states, the discharge has existed for seventeen years, and is the result of an attack of scarlatina in early life. Many physicians have treated him but without benefit. Pus and frequently blood issue from both ears, soiling his pillow at night, and being at times so offensive as to drive him from the companionship of his friends.

The young man hardly seems to overstate his case when he says, "that with the disgusting discharge, the difficulty of hearing and the depression of spirits attendant therefrom, my life has been a burden almost too great to bear."

I made an examination with Gruber's speculum and a concentrated light from Tobold's apparatus, and found the bottom of each external meatus filled with pus, which was soon washed out with water and syringe. The tympanic membranes and ossicles of both ears were gone. The lower part of each meatus and the internal ear looked very red, and the latter were lined with minute spongy looking granulations, from which proceeded the pus and blood discharge. The right ear discharged most, and was duller of hearing.

With the watch the right ear could detect the tick only four inches off and its hearing power was represented by 4-48; the left ear could detect the watch tick six inches off and would be represented by 6-48 hearing power.

Mr. T—— says that when he was assigned his seat in the back part of the lecture room at the University, he could not hear the Professor, and had to be moved forward to the front row. He also could not hear the large bell in the Tower, which strikes the hours. Conversation had to be conducted with him in a loud tone.

The treatment consisted in thoroughly syringing the ears every other day and sometimes daily with warm water and then applying a solution of nitrate of silver and carbolic acid dissolved in glycerine and water, ten to twenty grains to the ounce. The nitrate of silver was applied of forty grains to the ounce in strength, and with a small camel's hair pencel brush, so as thoroughly to touch all parts of the inflamed ear.

These applications were made through four months. Both ears commenced rapidly to improve, the discharges entirely ceased, the hearing improved, the desponding spirits fled, and a new life and energy seemed infused into the young student. He took his first seat assigned him at the back part of the lecture room, could distinctly hear the Professor's voice and the tones of the bell on the clock tower. Conversation raised hardly above the ordinary tone is enjoyed, and to those not acquainted with his history he appears to have good hearing power.

His hearing is remarkable taking into consideration the facts that he has lost both tympanic membranes and the ossicles, showing, as has been said before, that the tympanic membranes are not absolutely necessary to fair hearing.—*Nashville Journal of Medicine and Surgery.*

Tape-Worm.

BY F. L. GERALD, M. D.

In August, 1874, H. S. came to me, saying that he had been troubled for four or five years with a tape-worm. He said that he had taken almost everything that had been suggested to him, such as kousso, pumpkin seeds, and turpentine. He had been under the care of Allopathic and Homœopathic physicians with no effect only to cause the expulsion of a few sections of the worm. I directed him to abstain from eating anything for the next twenty-four hours. I allowed him all the lemonade that he wanted to drink until the expulsion of the worm. I gave him one drachm of Comp. Powder of Jalap, to be steeped in an ounce or two of hot water, to take dregs and all, on retiring the following night. I also gave one-fourth of a pound of Pomegranate Bark, to be steeped in a pint and a half of hot water down to half a pint, and as soon as the Comp. Powder of Jalap had got through operating to drink the whole of the Pomegranate within half an hour. Soon after taking the last dose he had a little nausea and a very bad feeling in his bowels, and a desire to go to stool. The worm passed with the head attached, alive and knotted up. The next day the Homœopathic physician came into my office, who had tried to expel the worm but without success, exclaimed that it was all d—d nonsense for Homœopathic physicians to think of removing tape-worms with infinitesimal doses. This worm was about thirty feet in length.

In November, 1875, a dentist, a friend of

mine, sent to me Mr. T. for me to fix him something to remove a tape-worm that was troubling him. I prepared the medicine the same as for case first, and directed the dentist to see that my orders were carried out. In about two days he brought me the worm, about fifty feet in length entire.

In December, 1875, S. P. came to me from Boston, saying that he had a tape-worm, and that he had been trying for a long time to get rid of it. He was anæmic, dizzy and fretful. I put up six ounces of Pomegranate Bark, to be steeped in the same amount of hot water as in cases first and second, the treatment to be the same also. In about two hours after taking the Pomegranate he began to feel very much distressed in his bowels, and fainted. As soon as he became conscious he felt like having something pass his bowels, and in about three mimutes the worm passed with the head, alive and rolled up like a ball. As near as we could make out it measured about eighty feet in length. Since the removal of the worm this patient has gained forty-seven pounds in weight.

December 3d, 1876, I removed a tape-worm from a young man with the same treatment as in the above cases.

Within the past three years I have had six patients that were troubled with tape-worms. I have removed four of them by this treatment, the first time trying. The old way of giving Pomegranate, in small and broken doses, amounts to nothing. Prof. Locke, of Newport, Ky., was the first physician that made any improvement upon the old treatment.—*The St. Louis Electic Medical Journal.*

Tetanus After Hypodermic Injection of Morphia.

The hypodermic injection of morphia is commonly regarded as devoid of the ordinary risks of surgical operations. But a case which has recently occurred at Southsea shows that, however slight it may be, its self-administration is not attended with immunity from risk. A lady has died of well-marked tetanus after the use on herself of hypodermic injection of morphia, it is supposed, given with a rusty needle. At any rate inflammation was found around several recent punctures. The lady had been taught the use of the hypodermic syringe some years before, for the relief of the vomiting of pregnancy, and there was some reason to believe that she had practised the injection surreptitiously where no actual occasion for it existed. At any rate she had concealed its recent use from her husband. The tetanic symptoms commenced in the jaw and ran a rapid course to opisthotonos and death. She was seen by Mr. Burford Norman and other medical men, who regarded the case as one of traumatic tetanus caused in the way we have intimated. It is certainly a conceivable result. A nerve may easily be pricked by the point of a syringe and an irritation set up such as seems to be the proximate cause of tetanus. But it appears to have been overlooked that very singular symptoms are in rare instances caused by morphia itself. In some of the lower animals this effect is uniform. In the mouse, for example, it is so. In man similar symptoms have been recorded. Dr. Guy mentions two or three anomalous cases in which tetanic spasms were prominent symptoms of poisoning by morphia, and a remarkable case was reported a few years ago in the *New York Medical Journal*, in which a woman suffering apparently from dyspeptic oppression, with great restlessness, was treated with a hypodermic injection of two-thirds of a grain of morphia, and twenty minutes afterwards one-third of a grain more. A few minutes afterwards she fell back in bed with her mouth open, and spasms of the muscles of the back. She ultimately recovered. It is possible that in such a case as that at Southsea a similar effect of the morphia may have assisted the slight traumatic cause in producing the tetanus. The case is another illustration of the unwisdom of allowing patients the control of their sedatives. —*London Lancet.*

When to Operate for Mammary Cancer, and When Not.

Mr. Sampson Gangee, F. R. S. E., surgeon to the Queen's Hospital, Birmingham, has the following excellent remarks in a late number of the British *Medical Journal:*

It is especially true of operations for cancer, that they should not be undertaken unless there is the utmost attainable certainty of the surgeon being able to complete them; to remove the whole disease, and leave the parts in a state favorable to speedy and solid union. If a scirrhous breast is to be interfered with at all, such interference cannot be too speedy or too thorough. From a woman above sixty, it is only under very exceptional circumstances that the removal of a scirrhus should be recommended. In old persons, such growths are often very slow in their course, give little pain, and are consistent with several years' life with comparatively little discomfort. The other conditions which are a bar to the operation are—c Ulceration of the tumor and of the covering

integument; *b.* Adhesion to the pectoral muscle; *c.* Infiltration of the mammary gland with cancerous matter as distinguished from the circumscribed tumor in its substance; *d.* A chain of indurated glands in the axilla; *e.* Any induration of the glands above the clavicle, *f.* Brawny infiltration of the skin over the affected breast; *g.* The existence of scirrhus in both breasts, or in any other organ besides one breast.

In an otherwise healthy person below fifty-five years of age, I do not consider a retracted nipple, a pucker or dimple in the skin, or one enlarged movable gland in the axilla, severally, objections to the operation. Once operative interference is decided upon, which is the best plan? Clearly the knife, not the elastic ligature or caustics.

A few words as to the operation and its after-treatment. Commencing at the sternum, I direct the incisions straight across the chest, through the fascia covering the pectoral muscle, which I invariably dissect clean. The mamma, grasped in the hand, is forcibly raised, the handle of the knife being freely used to separate its loose connections; the point or edge of the instrument is only employed to give a light touch to any bond of union which resists a goodly amount of traction. By this means very little blood is lost. It is now many years since I tied or twisted a vessel in an operation of this kind. The surface of the wound is lightly brushed with styptic colloid, and narrow strips of lint soaked in the same agent are used to close the wound after the edges have been very accurately adjusted by points of metallic sutures, at a distance of about three-quarters of an inch from each other. A drainage tube is placed in the outer angle of the wound, and over it pads of picked oakum in common muslin bags. A nicely compressing bandage surrounds the chest, and binds the arm to the side, with the hand across the chest. The dressing is not troubled for a week, when, as a rule, the greater part of the wound is healed. The operation, thus simplified according to the first principles of plastic surgery, is attended with singularly little pain.—*The Medical and Surgical Reporter.*

(*For the Journal of Materia Medica.*)

Cold Application in Croup.

W. H. Lanman, M.D., Mount Holly Springs, Cumberland Co., Pa., directs attention to cold applications to the neck in cases of croup. He wraps a cold towel around the neck, and renews as often as it gets warm. This has been his practice during the last eight years with uniform good results.—Out of a number of cases treated during the cold season he communicates the following:

Boy aged five years was attacked in the night of December third.—Was called to see him on the fourth, Saturday, at 10 o'clock P. M. Found him with all the symptoms that characterize membranous croup in an aggravated form. My impression was decidedly unfavorable.—I did not think he could live more than two hours. I immediately made application of cold water to the neck with directions to repeat every half hour, with internal treatment; boy made a good recovery in six days. I succeeded in removing the false membrane with

℞ Pot. Iodide .....grs. xx.
Senega syrup..... ʒ iii.
Aqua, distilled..... ℥ iss
M. Small teaspoonful every three hours.

We regard croup inflammatory, affection of the Trachea and Larynx being accompanied by the exudation of false membrane upon the diseased surface, and I was accustomed to prescribe a topic of cold water on this principle, that it will check the flow of blood to the diseased parts, and arrest the further progress of the disease. I attribute the recovery of this boy with every other patient, to the action of cold water applied directly and unremittingly to the throat.

Treatment of Snake Bite.

B. P. Key, M. D., (Nashville Journal of Medicine and Surgery) in referring to a case of snake bite which came under his care says: Found him almost unable to swallow, and that large vesicles had appeared upon the surface of the leg from the knee down. Upon further examination I found that the little vesicles formed contained a bloody serum, and furthermore, that there was a sense of constriction experienced about the chest. So I at once concluded that my patient would die if not relieved very soon, and commenced my treatment with a full dose of morphia sulph: to relieve the pain, and overcome the constriction complained of about the chest, supporting the strength of the patient by the administration of alcohol. Local treatment consisted in free application of cups to the part and retaining the glass in position as long as any blood would exude. Washed the surface with diluted tincture of iodine, and applied the same remedy over the whole extent of the swelling. My patient lingered for a few days, then gradually improved from day to day, and was soon able to go on his way rejoicing.

Monthly Summary.

Oleate of Bismuth.

There are but very few solvents of bismuthic compounds which permit their promiscuous use internally or externally. That which is most commonly employed is a solution of ammonium-citrate, containing bismuth either as nitrate or as citrate—according to the mode of preparation, and known under the names "liquor bismuthi" or "liquor bismuthi et ammonii citratis." Mr. S. C. Bettey now proposes a new solvent, namely, oleic acid, which will probably be found to be more advantageous, when desiring to employ the solution endermically. This compound was first suggested by Dr. Louis Lewis, of London, and is prepared by Mr. Bettey as follows: Oxide of bismuth, Br. P.,† is ground very fine, and the oleic acid gradually incorporated with it. The mixture being placed into a suitable vessel, is subjected to a temperature of nearly its boiling point, then allowed to digest with frequent agitation at a temperature of about 60° C. during four days, or until it solidifies. The result is, pharmaceutically a plaster, chemically an oleate of bismuth. According to Mr. Betty's statements, however, the results of this manner of preparation are not uniform, so that probably an easier or more reliable process will have to be substituted.

As to the therapeutic application of this compound, it might be objected to by those who maintain that the energy of the bismuthic compounds is exerted by mechanical contact. Yet it will probably be found a useful application in certain skin diseases, as it readily melts in the hand, is bland to an excoriated surface, and penetrates by its limpidity.—*New Remedies.*

Parasitic Fungi, the Cause of Coughs.

An Italian investigator has been studying the cause of coughs, and has come to the conclusion that they are the result of the presence of a parasitic fungus in the air passages. In severe cases the parasite multiplies and takes possession of the lung cells. Quinine is said to possess the power of stopping the microscopic fungi, and is therefore recommended as a remedy. The Italian doctor has successfully used a powder composed of the chlorohydrate of quinine, one part; bicarbonate of soda, one part; gum arabic, twenty parts. The soda is intended to dissolve the mucus, the gum arabic to increase the adherence of the powder on the bronchial passages. The blowing in of the powder should take place during a deep inspiration of the patient, so that it may penetrate the wind-pipe, the chief seat of the microscopic fungus. Inhalation of the fumes of sulphur, or of sulphurous acid, cures catarrhal and other affections of the air passages on the same principle, and has proved of singular service in the epizootic and distemper of horses and other animals.—*Nashville Jour. Med. and Surg.*

† The trisnitrate and carbonate are useless for this purpose.

A New Remedy for Whooping-Cough.

Lasinski, in a recent exchange, highly recommends insufflation of the following powder in whooping-cough:

℞ Quinine sulph. grammes 1.0 grs. 15.
Acidi salicylici gramme 2.0 grs. 30.
Sacch. albi.
Natr. bicarb. aa gramme .6 grs. 7.5. M.

He uses the powder morning and evening, and makes it last ten days, that is, nearly one grain of quinine and two of salicylic acid are used in each insufflation. He confesses that children make resistance, but claims that the results are so favorable that it is worth while to persist. Distinct action of the medicines appears at latest eight days after commencement of their use, and is shown by a quantitative or qualitative diminution of the attacks. The experience of the author in twenty cases has been that a complete arrest of the whooping-cough takes place in between eight and thirty days; adults and older children, were more amenable to treatment than quite young children. His method of procedure with children is to have them held in the lap of an assistant while a tongue spatula armed with a blowpipe carrying the powder is inserted; during one of the deep inspirations which follow crying and gagging the operator blows the powder down. Care is taken to depress the base of the tongue well and to direct the end of the blow-pipe behind the epiglottis.—*Ibid.*

Foreign Bodies in the Nose.—(*Medical Record.*)

Blow the patient's nose for him, by closing the empty nostril with your finger and blowing suddenly and strongly into the mouth—an efficient method which has often succeeded, when instruments have failed. The glottis closes spasmodically, and the whole force of your breath goes to expel the button or bean which commonly flies out at the first effort.

In adult cases, the Politzer method of inflating the tympanum might prove as serviceable and more agreeable.

Immediate Cure of Piles.—(*Lancet—Medical Record.*)

M. Reves, of Edinburgh, has adopted a plan of healing internal piles, to which he has given the term "immediate cure." The operation is rapid, and the entire treatment short, as compared with the ordinary method, viz.: by nitric acid-ligature, clamp and cautery. He thinks, moreover, that it is free from danger, and does not always require an anæsthetic. The piles being well down, are punctured to their bases by the conical lip of the gas cautery (or Paquilins). The number of the punctures varies with the number and size of the piles, a pile the size of a half-walnut requiring two or three. A dull red heat should be employed, and the point of the instrument is to be gently rotated while it is within, otherwise a portion of the eschar will be withdrawn, and then hemorrhage may ensue. Ulcers or fissures should be cauterized at the same time. Should there be any oozing, a touch of the cautery will stop it. The piles are then to be returned, and a half-grain morphia suppository inserted. After the bowels have been confined for four or five days, a warm injection is to be given, and followed upon the succeeding day by a laxative. At the expiration of a week the patients are discharged. Of eighteen cases thus operated upon two were not allowed out for ten days, and one for a fortnight, but in these cases there was some uterine or urinary complication. All the patients were examined subsequently, and it was exceedingly difficult to discover by the finger or speculum that there were any cicatrices following the operation.

Argyria.—A Method of Administering Nitrate Silver without Producing Discoloration of the Skin.—(*Medical Record.*)

The patient, a young man about twenty years of age, had taken sufficient of nitrate of silver to produce marked discoloration of the skin. It was said by the Clinical teacher that nitrate of silver could be used for two or three years without producing such effects, if given in half-grain doses three times a day, until sixty, perhaps eighty grains had been given, and then making an interval of two or three weeks. At the close of the vacation, the remedy could be resumed, and when the stated number of grains had been taken, another interval was to be made, and so on.

Solvent for Salicylic Acid.

Take of salicylic acid, dr. ij; solution of ammonia, oz. ij, and of water, oz. vj. M. One ounce of this solution contains fifteen grains. *Nashville Journal of Medicine and Surgery.*

Chronic Bright's Disease.—(*Medical Record.*)

A correspondent calls attention to the unmeaning stare, dullness and sluggishness of the pupil, well dilated, as almost unmistakeable co-incidence of chronic Bright's disease, and adds:—There were some forms of hysteria in which such characteristic expression might be seen, but when present in male patients, it was very much more likely to be evidence of kidney disease; it should suggest a thorough examination of the urine, and analysis of the case. The following treatment was recommended:—Make the diet as little nitrogenous as possible. Use milk freely, and iron and cod-liver oil, were recommended for the purpose of making up the deficiency in the red corpuscles by the increase in the elimination of albumen. To assist the iron, it was combined with nux vomica and sweet spirits of nitre, according to the following formula:—

℞ Tr. Ferri Muriat.....gtts. x.
Tr. Nucis Vom.....gtts. x.
Spts. Etheris Nitros... ʒ i.
M. To be taken three times a day.

If gastritis troubled the patient, the iron and cod-liver oil were to be stopped, and a saline purge to be administered—cream of tartar being regarded as the best. Large doses of pepsine and oxalate of cerium might be used to quiet the stomach. The specific treatment for the disease consisted in the use of the following:

℞ Hydrarg. bichlorid....gr. 1-20.
Digitalis.....gr. i.
Quinine Sulph.....gr. i.
M. To be taken three times a day.

The skin was to be freely rubbed with olive oil twice a day.

(Dr. Bates, in similar cases, places much importance upon the following combination, when a chalybeate is indicated:

℞ Firwein..... ℥ viii.
Pyro. Phos. Iron..... ʒ iv.
M. Take a teaspoonful three times a day.

He regards Firwein by virtue of its healing and restorative properties, as particularly useful in Bright's disease.)—*Ed.*

"After Pains" of Tooth-extraction.

J. A. Chapple (Dental Cosmos) says he has found nothing so beneficial for obtunding after-pains as phénol sodique, a phenate of soda, "sold by all druggists." It is indispensable to a surgeon's cabinet, and every dentist who has employed it in his practice will, he feels confident, agree with him in the assertion. Saturate a pellet of cotton in the above preparation, apply it to the socket, and dimiss your patient. —*Louisville Med. News.*

Abortive Treatment of Pneumonia by Fluid Extract of Ergot.

Dr. J. B. Scearce, (*Med. and Surgical Reporter*,) directs attention of the profession to a new abortive treatment in the congestive stage of pneumonia, which consists in bringing the system rapidly under the influence of Ergot of rye. He gave the fluid extract in half drachm doses, repeating every two hours until the symptoms are relieved, or ergotism produced, indicated by dilated pupils, vertigo, a sense of fullness in the heart, drowsiness, &c. He refers to severe cases treated in this manner during the past winter, and in every instance the disease was aborted, and the patients convalescent in from two to three days from the administration of the first dose. He says, "in order to test it thoroughly, I used no other remedy, either local or constitutional, and carefully watched the results. In from twenty-four to thirty-six hours the pain was relieved; the high temperature, rapid pulse, and hurried respiration brought down to their normal state; expectoration lessened in quantity, and deprived of its blood stained character; and instead of waiting from seven to nine days for this to run its course, as it does under the usual treatment, our patients were entirely relieved in less than half that time.

After the disease is controlled, it should be continued for a day or two longer in diminshed doses, and at longer intervals, for the weakened capillaries, if entirely set free, permit contractile power, and easily gives way to congestion again. In one of my cases I discontinued the medicine as soon as the symptoms were relieved, and a relapse occurred, but yielded readily to the same treatment."

Iodine and its Preparations in the Therapeutics of Infancy.

Mr. JULES, at the Paris Hospital for Children (*Moniteur Therapeutique*) calls attention to the following points:

1. Tincture of iodine must not be applied to children of a tubercular diathesis; it may be diluted with glycerine or some unguent.

2. Iodide of potassium, or iodide of iron is not to be given to children under two years of age, except in cases of acute hereditary syphilis.

3. Iodoform is recommended in cases of ozæna and scrofulous wounds.

4. Albuminuria sometimes follows the external application of tincture of iodine, especially when applied to eruptions. Iodide of potassium has a similar effect, but in a less degree. —*The Doctor.*

Precautions in Using the Hypodermic Syringe.

In the last volume of the Transactions of the West Virginia State Medical Society, Dr. John Frissell relates a case of mammary cancer proceeding from the puncture of a hypodermic syringe. He adds the following directions regarding the use of this instrument: In the first place the needle is to be polished and washed until it becomes perfectly clean and smooth. Secondly, after thoroughly cleansing the inside of both needle and syringe, the fluid to be injected is to be slowly drawn in. Then, thoroughly anointing the needle with a solution of carbolized glycerine (glycerine eight drachms, carbolic acid one drachm), the skin at the point selected for the injection is to be seized between the thumb and forefinger of the left hand, lifted up and made tense, and the needle pushed through at right angles, taking special care that its point neither touches muscle, gland, or other solid tissue. The fluid should be then slowly injected into the cellular tissue. After the withdrawal of the needle, a finger should be placed over its point of entrance, and the part rubbed and pressed until it becomes perfectly smooth and flat. Should there be any irritating ingredients in the injected fluid, their action, of course, must be regarded as independent of the condition of the needle and syringe.

When careful to follow strictly the directions above given, in the use of the hypodermic syringe, he has seen neither sores, tumors, abscesses, nor bad results of any kind follow.—*Louisville Med. News.*

Treatment of Carbuncle by Blisters.

M. Jules Guerin, in a communication to the Academie de Medecine, says that the most efficacious mode of cutting short the progress of a carbuncle and hastening its cure is to cover the whole of the inflamed part with a large blister, having a hole in its center to admit of discharges. The blister must be continued on until complete vesication has taken place, and any portion of the carbuncle over which this has not done so will remain hard and resistant. When the blister has taken effect the pain is at once relieved, and the redness and resistance of the tumour disappeared, and it becomes benign and inert, its enucleation proceeding under the use of ordinary means, without the aid of the bistoury. When after the discharge of its contents a deep excavation remains, it is useful to apply to the walls a solution of nitrate of silver, with the object of obliterating the open vascular orifices and impeding the absorption of the diseased liquid.—*Nashville Journal of Medicine and Surgery.*

Iodide of Potassium in Threatening Miscarriage.

Dr. BLAIN (*L'Abeille Medicale*) narrates the following case:—Mrs. L., æt. 26, of moderate stature, perfect conformation, in fair good health, of well regulated habits, married six years, without any history of syphilis, presented herself, 6½ months *enceinte*, fearing a miscarriage. She had conceived three times already. The first time she went to the eight month: the child lived five days. The second time she miscarried at 7½ months; the child lived seven days. The third time she carried until the seventh month; the child lived ten days. The hæmorrhage, which it was feared was a precursor of miscarriage, was not great. There were some uterine contractions; these were dispersed by the exhibition of laudanum to the uterus per vaginam and over the pubes. The abdomen was greatly distended, and there was slight puffiness of the legs. Her rest had been greatly disturbed by dental neuralgia. For this chlorohydrate of morphine was prescribed. Dr. Blain calling to mind the teachings of M. Tarnier, elected to administer iodide of potassium. He commenced with seven grains a day, and increased the quantity to twenty-eight grains. The dental neuralgia, sleeplessness, and œdema of the legs gradually disappeared. The patient went to her full time, and gave birth to a healthy infant, weighing seven pounds. The child died from broncho-pneumonia four months after. The patient became pregnant again for the fifth time. At the sixth month she began taking iodide of potassium. She was delivered at full term of a fine child. There was some puffiness of the legs, but no albumen in the urine. From the above case one has fair ground for supposing that iodide of potassium has some power over the uterus. Whether this be as controlling the muscular fibres of the organ, or acting as an alterative, further research must decide.—*The Doctor.*

Acute Glaucoma, Caused by Atropia.

Dr. MAGNUS (in the *Klin. Monatsbl.*, xiv., p. 386) records the case of a man, æt. 74, who applied for the extraction of a cataract. A single drop of solution of sulphate of atropia was instilled into each eye, and set up acute glaucoma. Three weeks afterwards there was complete dilatation and immobility of the pupil, a shallow anterior chamber, a marked vascular injection around the corner, a great increase of the hardness of the eyeball, and a considerable limitation of the perception of light, the patient being able to perceive a large light only when held immediately in front of the right eye.—*The Doctor.*

Foreign Body in the Eye-Ball for Fourteen Years Without Disturbing the Sight.

Dr. MARTIN has related in the *Receuil d' Ophthalmologie*, the case of a marble worker who had suffered many attacks of pain, photophobia, lachrymation and redness of the left eye. A dark rounded body, the size of a pin's head was seen resting on the crystalline lens and riding on the inferior outer border of the pupil. No sign of lesion could be found in the cornea. For the removal of the foreign substance, a broad linear incision was made through the lower external margin of the corner and the aqueous humor was allowed to escape very slowly for fear lest the foreign body should drop down behind the iris. With a pair of forceps the body was easily seized and extracted, and then it was seen to be a bit of marble. The iris protruding a little through the wound, a portion of it was excised to prevent the formation of a hernia of the iris. The pain left the eye, the wound healed kindly, the eye has never since been troubled and still has a perfect vision. The man recollected that the first attack followed a bit of marble striking his eye fourteen years before.—*The Doctor.*

Treatment of Salivation.

Salivation may occur by accident or design. To guard agaist it the teeth should be kept free from tartar (by the dentist). A soft tooth-brush should be often used with some alkaline (perhaps astringent as well) tooth-powder or wash. Such compounds as the following are good specimens of what is wanted. They are all agreeable to the taste:

℞ Pulv. saponis.....gr. xx 3 ss;
Pulv. myrrhæ..... 3 ss;
Pulv. cinchonæ..... 3 ss 3 j;
Pulv. iridis florent.... ℥ ss;
Cretæ preparat..... 3 xj;
Ol. ros. geran.....q. s. M.

Sassafras or winter-green oil may be used instead of the rose-geranium.—*Louisville Med. News.*

Castration for the Cure of Spermatorrhœa.

Dr. SPAULDING has brought before the Detroit Academy of Medicine a case in which, from a boy fourteen years old, he removed both testicles; the boy was rapidly becoming an imbecile from masturbation. Before resorting to so desperate a measure, Dr. Spaulding consulted with several eminent medical men, who deemed the operation justifiable. The result is satisfactory; the youth is acquiring good business-habits and earns his own living. *The Doctor.*

Acute Tonsillitis Dependent on Atmospheric Fungi.

Staff-surgeon HENRY F. NORBURY, R. N., of H.M.S. *Juna*, has contributed a paper on this subject to the last official Report on the Health of the Navy. Having frequently examined microscopically the air of the ship when she was in and on the other side of the Suez Canal, Mr. Norbury observed the presence of very numerous globose spores of fungi. These spores corresponded exactly with many found on yellowish-white elevations that appeared on the tonsils of twelve men suffering at the time from all ordinary symptoms of acute tonsillitis. These globose spores were of well-defined contour, varying in size from 1-1200th to 1-2000 of an inch in diameter, some of the larger possessing a yellowish tint. The filaments, whether of the fructification or mycelium, were simple, cylindrical, extremely slender, and colorless. The patients in question slept in different parts of the ship, and had no particular communication with each other on duty or otherwise, and hence it is remarked that they could not have contracted the disease from each other. The writer makes the following suggestions: "Whether the spores, having previously alighted on the food, came into contact with the tonsils during deglutition I am unable to state; but as, after a hard day's work in the tropics, men usually sleep heavily, and often with their mouths wide open, the affection was probably caused by prolonged inhalation of the spores, which found a suitable soil on the moistest part of the oral cavity, the tissue of which was perhaps also relaxed by smoking, or otherwise temporarily impaired. No similar case of tonsillitis was seen prior to the appearance of the spores in the air." —*London Lancet.*

Lemon-Juice in Carbuncle.

Dr. GIBBONS, having been a sufferer from carbuncle, relates in his admirable journal his own case, in which lemon-juice seemed to have a most beneficial effect. Wine, whisky, tonics, and all the usual remedies gave him no relief, and did not help digestion. As soon as he took lemon-juice digestion improved, as well as the local symptoms; and the effect was such that he intends to treat his patients in the same way. He also thinks blue pill frequently useful.

We have found in other diseases lemon-juice a most grateful remedy, especially where (as Dr. Gibbons mentions in his own case) there is a desire for acid drinks and vegetables.—*The Doctor.*

Aconite Poisoning.

Mr. HERBERT JONES has reported to the *Brit. Med. Jour.*, March 3rd, a case in which a gentleman took by mistake two ounces of tinct. aconiti at 11 a. m., and went out for a walk. He returned at 2.30 p.m., looking strange. At 3.30, violent vomiting, delirium, prostation, imperceptible pulse, and temperature of 84 were noticed. Nevertheless towards midnight the heart sounds were more distinct and the patient gradually recovered. Mr. Jones distinctly states that the pupils remained *widely dilated* for nearly three days, though some writers have noticed contraction. This is, we believe, the largest dose from which recovery has ever occurred, and at first some doubt was naturally felt about the quality of the tincture, but the vendor declared it was of the British Pharmacopœia. Taylor mentions a case in which ten drachms were swallowed, but that tincture, though of London Pharmacopœia strength, had not been macerated the proper time. Hot coffee and brandy and water, were given, after an emetic and castor oil. The nails were "slate blue."—*The Doctor.*

On the Nature and Treatment of Cracked Nipples.

According to Dr. Le Diberder, fissures of the nipple are not really the entire ailment, but a manifestation of derangements of the puerperal state.

If, as Dr. Donne asserts, the fissures are due to the constitution of the milk, the alteration of the latter would imply a pathological condition of the blood. Indeed, as as soon the fissures appear, the pulse accelerates, the skin becomes hot, there are much thirst, general lassitude, and, lastly, perspiration. Sleep and appetite participate in the general disorder. Under the influences of the fever, the fissures become more tender, and augment in surface and depth; nursing becomes impossible. The author considers the febrile excerbations as the cause, not the consequence, of the fissures; he has been led to place a secondary value on local treatment, for which he substitutes general treatment, with sulphate of quinine. The latter is given in doses of fifty to eighty centigrammes a day; the local treatment consists in protecting the the parts with Samaritan balm or fresh, unsalted butter. In all cases the improvement is rapid, and a cure is accomplished at the end of five or six days. In support of his theory, the author refers to numerous observations and a practice of thirty years, and invites a trial of his method.—*Nashville Journal of Medicine and Surgery.*

Kerosene Oil in Croup.

Dr. E. W. Harvey, (*Medical and Surgical Reporter*,) writes:—The following case came under my notice in January of this present year. A child, two years old, was taken with diphtheria, and my usual "sheet-anchors" failed me; he grew no better, and January 21st he began to show symptoms of croup. They increased, until January 24th, when I gave up all hope of saving him, expecting he would go as his brother did the week before him.

As I was called away suddenly, I ordered, as a last resort, a bath from vapor of pine tar every hour, until I should return.

Returning a few hours after, I found less dyspnœa, and rejoicing in this newly found remedy, again left him, each time finding the dyspnœa abating, until he recovered from the croupy symptoms.

My disgust was soon as great as my former joy, at learning from the parents the following truth, viz.: after giving the first bath, he was greatly relieved for a time, but was soon suffering as bad as before, and after giving the second, with no better results, they gave him one teaspoonful of kerosene oil. They said it relieved him instantly. In four hours they repeated the dose; and it was after the second dose that I saw him last; for, upon learning the truth of the matter, I ceased treating him. Certain it is that the child recovered his health, and is the only one of my patients with membranous croup that I have saved this winter.

I find, upon investigation, several cases of its being taken in doses up to two tablespoonfuls for colic, croup, cough, cold, etc. Some of the poorer class use it as a panacea for all ailments. One patient, who has taken it several times, has dyspepsia very bad; whether from this or not, I am unable to say. I very often *leave* patients here who will take kerosene, with my remedies, until I know it.

Venesection in Obstetrics.

Dr. Lebert (*L'Abeille Medicale*) calls attention to the great benefit derived by the withdrawal of blood from the arm in cases of tedious labour with acute pains in the back. He quotes several cases. One patient had lost six children. During the birth of the seventh, blood-letting was resorted to, and the child was born alive. The author, whilst giving due weight to the accepted statement that the vigor of the present generation is less than its predecessor, and hence requires a less lowering treatment, contends that there are circumstances where blood-letting should be adopted, and especially in obstetric cases, wherein it gives rapid relief and leads to happy results.

Gelseminum in Irregular Uterine Contractions.

Dr. Fountleroy says: The following interesting and unique case is briefly submitted in further illustration of the therapeutic uses of gelseminum. The writer was called in consultation by Dr. William H. Byerly. The following history was elicited: In the *three* previous confinements, from the irregular contractions, partially affecting the muscular fibres, without uniform hardening of the uterine globe—from the exhaustive continuance, for two or three days, of the inefficient contraction, marked by frequent pulse, coated tongue and mental wanderings, the doctor had been forced to relieve his patient by a resort to instruments. When called upon the labor had commenced; the os-uteri was partially dilated, *and not at all rigid*, but the contractions evidently involved different planes of the uterine muscular tissue, first in one part, then in another. From his former experience, the doctor anticipated trouble and delay. The writer suggested the use of gelseminum, believing that the irregular uterine contractions were due to the want of tone in the sympathetic nervous system. Whether true or not, the result seemingly sustained the theory. Eight drops of the fluid extract were administered at an interval of two hours. After the second dose the uterine contraction became more general, and improvement gradually followed, until after the eighth dose, when the patient was delivered, by the unaided forces of nature, of a large, healthy child.—*Trans. Virginia Medical Society.*

Iodide of Starch as an Antidote.

Iodide of starch has been employed in paste as a dressing in foul and syphilitic sores, but has been little used internally. Dr. Bellini, professor of toxicology at the Royal Institute of Florence, recommends it as a valuable antidote in some cases of poisoning, especially by alkaline and earthy sulphides, caustic alkalies and ammonia, and the vegetable alkaloids for which iodised solutions are generally given. In poisoning by alkaline or earthy sulphides he believes it preferable to all other antidotes; in poisoning by caustic alkalies it is applicable when acid drinks are not at hand. Where iodised solutions of iodide of potassium are usually employed for vegetable alkaloids, the iodide of starch should be used instead, as far less irritating. It may also be given in some cases of chronic lead and mercurial poisoning, and particularly to children, in the form of syrup.—*London Lancet.*

Treatment of Eczema.

Dr. Taylor, of Charity Hospital, New York, (*Buffalo Medical and Surgical Journal*,) says:

He uses frequent applications of very hot water in dry eczema, glycerine and water in the intervals being applied on lint. In moist eczema the hot water, he says, does harm, though a few ablutions may be used to relieve burning pruritus in the most severe stage. Glycerine and black wash on lint is a favorite application. In both varieties an alkaline cathartic is used. The lead and opium wash, with a little glycerine, is also recommended for the moist varieties. He says, for dry eczema the remedy which I use most frequently here in the clinic is Anderson's powder, as follows:

℞ Pulv. Starch..... ʒ i.
Oxide of Zinc..... ʒ ss.
Pulv. Camphor..... ʒ iss. M.

This must be made into a perfectly impalpable powder, and frequently and thickly dusted over the affected skin, or rubbed into fine lint and applied. For eczema capitis, an oxide of zinc and mercury ointment is used after the scabs have been loosened by glycerine, and gentle manipulation with a comb, and removed. Bismuth may be used in the place of the oxide of zinc, and camphor added to lessen pruritus. The child's diet is to be carefully regulated, milk being given it for food in preference to anything else, a little bread and meat both may also be used.

(We have derived much service from the following in similar cases:

℞ Elix. Iodo-Bromide Calcium Comp. ʒ viii.
Take a teaspoonful in water four times a day.
℞ Tinct. Benzoin..... ʒ j.
Apply on brush night and morning. With this treatment we have succeeded in effecting a cure of one case which had become chronic, and had resisted all medication, covering a period of several years.)—*Ed.*

Hydrobromic Acid as a Preventive of Cinchonism.

Mr. Fothergill of London, speaks highly of hydrobromic acid as a solvent for quinine, and a preventive of the head symptoms frequently experienced from its use. The following formula may be used.

℞ Quiniæ sulph.....drachm j.
Acid Hydrobrom,
Aquæ.....aa ounces iss. M.

Sig.—A teaspoonful in a little water three or four times a day. Hydrobromic acid may be formed as follows:—Dissolve ten ounces of potassium bromide in Oiv of water, and add eight ounces of acid tartaric. The acid remains in solution, and potassium bitartrate is precipitated.—*Nashville Jour. of Med. and Surg.*

Impotence.

Dr. C. B., of Miss.—I would suggest the following treatment: I will preface it by saying that I have found the phosphide of zinc the most suitable and reliable form of administering that inportant element, phosphorus. I have recently (and successfully) used, in two such cases as described by your inquirer, the following:—

℞ Zinci phosphidi,.....gr. ix.
Extracti nucis vomicæ, gr. xxss.
Extracti conii,.....drachm iss.
Ferri redacti,.....drachm iij.
Vel. ferri phosphatis,...drachm vj. M.
Ft. pill No. 90.
Sig.—Take one pill three times a day.

At the same time, as adjuvants to this medication, apply galvanism to the lumbar region, and electricity to the prostatic portion of the urethra, by means of a urethral electrode, the negative pole being over the sacral plexus; also cold baths to the spine twice a day, and monobromide of camphor at night, in sufficient doses to control sexual excitement, taken half an hour before retiring.—*The Southern Medical Record.*

Burnishing Ink.—A correspondent in this city asks for a formula for this preparation, sometimes known as "Shoemaker's Ink." The following are two recipes recently given in the *Druggist's Circular*:—

(1) Extract of logwood....1 to 2 ounces.
Tincture of iron.....1 to 2 "
Sweet oil.....1 to 2 drachms.
Alcohol.....1 pint.

In one formula, the alcohol is replaced by the same quantity of diluted alcohol, and in another, one ounce of powdered nutgalls is added to the same ingredients in the above proportion.

(2.) Extract of logwood.....4 ounces.
Bichromate of potassa.....12 grains.
Yellow prussiate of potassa12 "
Rain water.....1 gallon.

Boston Journal of Chemistry.

Formula for Perfumery.

Tuberose.

Ext. tuberose.....	24	ounces
" musk.....	4	"
" jasmin.....	1	"
Otto rose virgin.....	1	drachm
" neroli super.....	10	minims
Benzoic acid.....	2	drachms

Pure spirit, sufficient to make 4 pints.

Invisible Ink for Postal Cards.

The *Deutsche Illustrirte Gewerbezeitung* proposes the general use of what may be called "postal-card ink," for messages which are sent on such cards, or otherwise unsealed. A solution of nitrate or chloride of cobalt, or chloride of copper, mixed with a little gum or sugar, produces a "magic ink," which is made visible by warming, either by holding against the stove or over a burning match. Potassium ferrocyanide in solution may also be used; but this requires a developer, for which either copper or iron sulphate may be employed. With the former the writing will appear in brown, and with the latter in blue color.—*Boston Journal of Chemistry.*

Bromide of Ethyl as an Anæsthetic.

BY M RABUTEAU.

At a recent meeting of the Academy of Sciences* M. Rabuteau gave some details of an investigation of the physiological properties and mode of elimination of bromide of ethyl.

Bromide of ethyl (C_2H_5Br), or "hydrobromic ether," is a colorless liquid, with an agreeable odor; it boils at about 40°C., has a density of 1-43, and burns with difficulty. The boiling point and density are therefore intermediate between those of chloroform and sulphuric ether.

Bromide of ethyl absorbed by the respiratory passages produces absolute anæsthesia as rapidly, or even more rapidly, than chloroform. This result has been established with frogs, rabbits, dogs, etc. After five minutes', sometimes after two minutes' inhalation, by means of a sponge saturated in bromide of ethyl, dogs are completely anæsthetized. The animals recover more rapidly than when chloroform is used.

When a solution of hydrochlorate of narceia, or hydrochlorate of morphia, was injected under the skin of dogs, before inducing anæsthesia, an action was observed analogous but perhaps inferior to the simultaneous action of narceia, or morphia, and chloroform.

Bromide of ethyl is not caustic, nor even irritant, compared with chloroform. It can be ingested without difficulty, and applied without danger. not only subcutaneously, but to the external auditory meatus and to the mucous membrane. In this respect it is preferable to chloroform, which is very caustic, and to sulphuric ether, of which the ingestion is nearly impossible. Introduced into the human stomach in doses of 1 to 2 grammes, bromide of ethyl does not produce anæsthesia as when absorbed in sufficient quantity by the respiratory passages. It soothes pain and does not disturb the appetite.

This anæsthetic is nearly insoluble in water. Nevertheless, water shaken with it acquires a pleasant taste and odor. Frogs placed in water so saturated undergo anæsthesia in ten or fifteen minutes.

Bromide of ethyl is eliminated nearly entirely, if not completely, by the respiratory passages, whatever may have been the mode of absorption. At most only traces of it are found in the urine when it has been introduced into the stomach, and an extremely small quantity can be detected in that liquid when it has been inhaled. The author finds that bromide of ethyl does not decompose in the organism to form an alkaline bromide, such as bromide of sodium, a salt that is easily eliminated by the renal passages.

From his experiment the author concludes that bromide of ethyl is an anæsthetic agent possessing properties intermediate between those of chloroform, bromoform, and ether.—*The Druggists' Circular and Chemical Gazette.*

Comptes Rendus, vol. lxxxiii., p. 1294.

Treatment of Nervous Headache.

Dr. J. E. Lockbridge, of Indianapolis, contributes an interesting article on this subject to the *American Practitioner*, in which he says:

Having observed that bromide of potassium, in twenty or thirty grain doses, and tincture of aconite root, separately, relieved more cases than any remedies I had previously exhibited, I experimented with large doses of the drugs combined. For several years I have been in the habit of giveng in these cases sixty grains of the bromide of potassium and ten drops of the tincture of aconite root in a wineglassful of water, the same to be repeated in an hour or two if the head be not relieved; but a repetition of the dose is very seldom required. In the case of ladies and others who wish to have a remedy always at hand, or who are about to start on a journey, I supply them with the following mixture:—

℞ Bromide of potassium..... ℥ ij.
Tincture of aconite root..... 3 i.
Distilled water,
Simple syrup.....*aa* ℥ ij.

M. S. Take a dessert-spoonful in some water every hour until relieved.

My recipe may smack of empiricism in appearing as a panacea for every variety of headache, let the cause be what it may and the accompanying symptoms be what they will; but I am willing for it to rest under the soft impeachment, if indeed it relieves promptly only a moiety of these distressing cases. I will not

now attempt to give the *rationale* of this seeming paradox or the *modus operandi* of the cure, but will simply remind my readers that this nervous headache is a paradoxical, capricious, discouraging and worrying affection.

White House Whitewash.

A GREAT deal of "whitewashing" has been done at the national capital, some of which is by no means creditable to the operators; but an exchange highly commends the whitewash recently used on the east end of the Presidential mansion, the recipe for which is given as follows:—

Take one half bushel of nice unslaked lime, slack it with boiling water; cover it during the process to keep in the steam. Strain the liquor through a fine sieve or strainer, and add to it a peck of salt, previously well dissolved in warm water; three pounds of ground rice, boiled to a thin paste; one half pound of powdered Spanish whiting, and one pound of clean glue which has been previously dissolved by soaking it well, and then hang it over a slow fire in a small kettle within a larger one filled with water. Add five gallons of hot water to to the mixture, stir it well, and let it stand a few days covered from dust. It should be put on hot, and for this purpose it can be kept in a kettle on a portable furnace. About a pint of this mixture will cover a square yard upon the outside of a house, if properly applied. Fine or coarse brushes may be used, according to the neatness of the job required. It answers as well as oil paint for wood, brick, or stone, and is cheaper. It retains its brilliancy for many years. There is nothing of the kind that will compare with it, either for inside or outside walls. Coloring matter may be added of any shade desired except green, for which there is no material that can be used with lime. Spanish brown will make reddish pink when stirred in, more or less deep according to quantity. A delicate tinge of this is very pretty for inside walls. Finely pulverized common clay, well mixed with Spanish brown, makes a reddish stone color; yellow ochre stirred in makes yellow wash, but chrome goes further, and makes a color generally esteemed prettier. It is best to try experiments on a shingle and let it dry. *Boston Journal of Chemistry.*

Death Caused by a Lizard.

A NATIVE of East Indies was admitted into the Madras General Hospital, a small lizard having crawled into his nose; he died in consequence. The urine of these animals is very irritating, and blisters any part of the skin it touches.

EDITORIAL.

Solubility of Sugar-Coated Pills.

In a previous number, we gave our readers an interesting and sensible article by Prof. MOORE on sugar-coated pills, and have received many letters, expressing concurrence in his views, and thanking us for the hints it contained. As we before remarked, we are ready to supply all articles to the profession of ascertained value. It matters not whether the pills are coated with sugar or glue; so long as a physician is convinced from evidence that he prefers one to the other, we desire to supply him, but we do not like to be a party to inducing him to use articles that clearly appear to us, must, from the nature of the case, cause disappointment. Our experiments years ago were against the solubility of gelatine-coated pills, and for that reason we did not avail ourselves of the scheme of a "*new and taking article*" which was tendered us. We have seen no evidence to change our views then expressed, that the long time required for the solution of the gelatine, would in time cause complaint which would be a bar to their use.

Many assume to complain of sugar-coating, which, if pure and properly put on will dissolve *in two minutes*; but what will they say of gelatine-coating when it requires from one hour to twenty-four hours to dissolve the coating. It matters very little what condition the stomach may be in, alkaline or acid, it will at once remove the sugar, leaving the pill just as desirable as if it had been given plain, the question of further solubility depending upon the constituents of the pill, and whether the fluids of the stomach supply a proper solvent for them.

It is quite evident that when the coating will dissolve in water at about the temperature of the fluids of the stomach, that it is sufficiently quick for all practical purposes, and if two minutes is not prompt enough for ordinary patients, what will become of the patient who is waiting from one hour to twenty-four, for the slow gelatine-coat? Any improvement in the case would appear to be due to imagination or to nature.

We give an extract from a letter from a correspondent, who has given the subject attention, with results that confirm Prof. MOORE, Prof. REMMINGTON, Dr. YALE, and others.

"I was induced to investigate the pill-coating question, because of the effort to push the gelatine discovery upon the profession, and must confess I was quite taken at first by their appearance, and influenced by the representation of their quick action; but, after trial was disappointed, and then as did Dr. YALE, began to think and experiment for myself.

I give you as nearly as possible my method, and your readers can try it for themselves. Take a test

tube and put about one inch of water in it; hold it over a spirit-lamp, and when boiling, drop in a pill and let it boil till the coating has disappeared: hold your watch so as to note the seconds required.

I procured pills of your make and those of other manufacturers, and found yours to dissolve in boiling water in five seconds. One from a Philadelphia house in twenty, another in fifty-five seconds; an Eastern house in fifteen seconds; a Western in thirty-five seconds. A small lump of sugar was found four seconds in dissolving; McKesson's gelatine-coated pill was boiled two minutes—the coating swelled untill the cap seemed to burst off or separate, and let the pill out: the pill was then taken out and the coating boiled for three minutes before it dissolved, being five minutes or sixty times as long as your sugar-coating in dissolving. Schieffelin's yielded a little quicker, about seventy-five seconds, but did not dissolve entirely till over four minutes.

I then tried them at 100°F, keeping the water bath at that temperature, and alternately agitating the pill in the several test tubes; the coating on your pill dissolved in two minutes, the Philadelphia in four and five minutes, Eastern three and a half, Western six minutes. McKesson's Gelatine-Coated gradually swelled up and did not relieve the pill inside in two hours. I left the pill in the tube over night; in the morning the contents dissolved out of a small hole leaving the capsule undissolved after 18 hours of soaking. There was no material difference between this and Schieffelin's, as to time or action, that would be worth noticing. I shall give you more interesting points in another letter. I think that as so much agitation is needed to dissolve the Gelatine Coating that a doctor should after giving a dose to a patient start him on a dog trot around a block three or four times to get the effect." Yours, C. J.

Bacteria and Bromo-Chloralum.

We have tried numerous experiments with Bacteria and Bromo-Chloralum, and there is no question as to its power to destroy their vitality. Carbolic acid preserves vaccine virus and the virus of Smallpox, and also Bacteria. Bromo-Chloralum decomposes and destroys all vitality in the virus, as well as Bacteria. It will be observed that many articles preserve them, and that the articles that do so are not of the nature to decompose chemically, but to stupefy; but when Chlorine is present, the remedy is more destructive as well as when astringents are employed. In Bromo-Chloralum, we have the Bromide and Chloride of Aluminium, *the Chlorine and Bromine, with an astringent.*

Our attention was particularly called to this, by its action upon a large vat of water in ferment, which was at once arrested and purified; we then tried various experiments with fermentations, started with yeast in various articles, and found the Bromo-Chloralum, used moderately diluted, arrested all fermentation at once, destroying the vitality of the plant.

Diphtherine.

BENNINGTON, VT., April 30, 1877.

Messrs. TILDEN & Co.:

Gentlemen.—About ten days since I contracted a severe cold, which resulted in sore throat, so much aggravated that I lost all power of articulation. The glands and tonsils were swollen and inflamed, and on the inside a whitish film or coat formed which was very painful. I tried the ordinary domestic remedies without avail, when a friend of mine handed me a bottle of your new preparation "Diphtherine," which I used as a gargle in the manner directed. The effect was wonderful, the relief almost immediate. In less than 24 hours I recovered my voice, the swelling and pain subsided, and in less than three days I ceased to feel any inconvenience from the attack. I deem it due to you to report this fact with the hope that it may be the means of inducing others to participate in the benefit I have received from this excellent remedy. Very truly yours, H. M. JOHNSON.

Firwein.

CASES IN PRACTICE BY PROF. C. G. POLK M. D., PHILADELPHIA, PA.

CASE 1.—*Tubercular Phthisis.*—This case, a single lady, came under my charge last October, very much emaciated and in a very hopeless condition. Under the remedies I employed she recovered her appetite, the diarrhoea ceased, night sweats disappeared, but yet she was troubled with a very persistent and troublesome cough, which defied all remedies I employed. On the 24th. of January I found her taking Firwein without my authority, and claimed it was relieving her cough. I ordered her to cease the use of the expectorant I was giving her and continue the Firwein. Under its use the the cough is almost gone, her appetite is excellent, and the large vomica in her left lung is evidently healing. While I claim for the brain phosphoids she was previously taking, a part of the result, I must give to the Firwein also a part of the credit.

CASE 2.—*Chronic Bronchitis.*—The case was doing badly when I began with the Firwein. Within a week my patient began to improve and is now nearly well. In this case it lessened the amount of expectoration, quieted the cough, relieved night sweats, and restored the integrity of the digestive function.

CASE 3.—*Chronic Catarrhal Pneumonia.*—This case in a man of forty years of age, had been dosed with cod-liver oil, had taken Jayne's Expectorant and had gone from bad to worse. I put him on Firwein about the first of March, and he is regaining his health.

CASE 4.—*Tubercular Phthisis.*—In a lady, age 36. This case was one not uncommonly met with in practice—A case, in which the entire catalogue of quack expectorants had been well nigh run through with—I

found her emaciated, clubbed nails, sore throat, diarrhœa, night sweats, and complete abeyance of the digestive function. Upon the mantle, I found a bottle labeled "Vitalized Hypophosphites" and a bottle measure for taking the panacea in. She said a friend had sent it from New York, and claimed it had done her serious injury, or as she wittily remarked "it ought to be highly vitalized for it had taken about all the vitality out of her." I gave her Firwein and Loeflund's malt extract with little hope of permanent benefit. Under this treatment she gradually and yet perceptibly improved, until the twelfth day, when a severe hemorrhage from the lungs ensued and she died on the 14th day from the time she came under my charge.

SENATOBIA, Tate Co., Miss., April 25th, 1877.

Messrs. TILDEN & Co.,

Dear Sirs.—Please send me three one pound bottles of Firwein. The more I use it, the better I like it. Since I ordered the last, I have used it in Asthma, Croup, Pneumonia, Colds, etc., etc., and I find no other remedy that equals it. I feel certain it will abort Phthisis Pulmonalis in the first stage of the disease, and it has no equal in Bronchitis, and especially in acute cases. I cannot say too much for this noble preparation. I prescribe it frequently, and hope it will become generally used by physicians, and the people.

Respectfully Yours, &c.,

J. M. Williamson, M. D.

(In publishing the above communication from an esteemed correspondent, Dr. Williamson, we wish to apologize for a typographical error in January issue of Journal—page 24—where his name was incorrectly printed J. M. Williams.)

Extract from letter of A. A. RAMSAY & BRO., Albia, Iowa, April 20th, 1877.

"We have tried your Firwein and find it a most admirable remedy in Catarrh, Colds and Coughs."

Extract from letter of Dr. G. W. CHASE, Tooele, Utah, March 30th, 1877.

"I find the *Journal* so useful I cannot well do without it. I will say here, I find your medicines so much superior to all others that I use them whenever I can get them, and sometimes have to send two hundred miles for the articles I wish. Your Elixir Iodo-Bromide of Calcium Comp., I cannot do without. With it I have cured, within the last year, three cases of Necrosis, one of Femur, and two of Tibia, and they were very bad cases. I have also found it valuable in a number of cases in liver complaints, skin diseases, &c., &c. Your Firwein and Bromo-Chloralum are unrivaled for the beneficial results in consumption and other diseases. I could give you a number of cases in practice, but have not time in this letter to do so."

To Relieve Morbid Thirst for Alcoholic Drink.

PHILADELPHIA, PA., April 27, 1877.

MESSRS. TILDEN & Co.:

Gentleman—I enclose for publication in your Journal the following:

A tonic and stimulant which partially supplies the place of the accustomed liquor, and prevents the absolute moral and physical prostration that follows a sudden breaking off from the habitual use of stimulating drinks:—

℞ Peppermint water.....12 drachms.
Sulphate of iron.....5 grains.
Spirits of nutmeg.....2 drachms.
Valerianate of quinia.....2½ grains.

Sig. Teaspoonful taken as often as the desire for strong drink returns.

I have had frequent occasion to test its efficacy in many cases in my practice, and have found it uniformly successful.

Yours Respectfully,

S. B. MERKEL, M. D.

Messers. TILDEN & Co.,

My Dear Sirs.—Seeing in your Journal of December last, an article upon Ranula, has called to mind a case of the same operated upon by my father in the year 1855, and reported in the American Medical Journal of Medical Sciences, July No., 1858, under the name of John J. Peele, which should have been J. S. Peete, as will be seen by referring to index of October No., 1858. The medical profession so far as I can glean from medical authorities upon the subject, still consider the treatment of Ranula, for the most part, uncertain.—Therefore I send you the report of this case, that it may be a second time, placed before the medical world, which seems to have overlooked it up to the present. The treatment as adopted by my father, is a certain and sure cure. The lady upon whom the operation was performed, is still living and has had no return of the disease. Please give the following report a place in your valuable Journal, as there is no doubt of the success of this treatment, and it will prove a blessing to all who may be so unfortunate as to suffer from this disease.

Respectfully, E. D. PEETE, M. D.,

Humboldt, Tenn.

Ranula Successfully Treated by Lead Ligature.

BY JOHN S. PEETE, M. D. of Tipton Co., Tenn.

Mrs. F. A. T. aet 30, in June 1855 consulted me, in

regard to an operation being performed, which would effect a permanent cure of Ranula, with which she was afflicted at that time, and had been, for nine or ten years. She informed me, that the tumor had been twice opened and its contents evacuated, with the view of effecting a cure, but with only a temporary relief. The case was of more than ordinary interest to me, from the fact of the lady being a personal friend, consequently I examined the best surgical authorities upon the subject, and after mature deliberation upon the plans laid down therein, concluded to treat the case upon a plan different from any of those laid down in the surgical works examined, and so far as I know, by an entirely new method.

It is true, that some have recommended the lead probe to be inserted in the orifices of the sublingual ducts, but in this particular case, this plan could not have been carried out, in as much as the orifices of the ducts were entirely obliterated, caused, I suppose, by inflammation consequent upon the previous operations.

On the 27th, of July same year (1855), at my request Mrs. F. A. T. came to my house, to submit to the operation recommended by me. At that time, the tumor was as large as a hen's egg and interfered very much with articulation.

I made a fine incision into the tumor and with a scoop removed all the contents of the sac, a thick, cheese-like matter; in six days after evacuating the sac, I passed a large size surgical needle, armed with a ligature to which was attached a roll or cylinder of lead, about 1-12 of an inch in diameter and two inches in length, from right to left entirely through the integuments and sac—The roll of lead was drawn by the ligature, through the punctures made by the needle. I then brought the two ends of the lead together forming a complete ring, which was allowed to remain, with no other unpleasant effect, than to remind the patient of the constant presence of some foreign body beneath the tongue. On examination at the end of two weeks, I found that a perfect union of the parts was accomplished, and there being no inflammation present, the lead was withdrawn, first straightening out the ring with a pair of small forceps and a probe. Soon after the removal of the lead ring, there was discharged about a half-ounce of saliva, which had accumulated in the sac since the lead ring was introduced. Up to this date April 16th, 1858, nearly three years since the operation, the patient remains entirely free from any further accumulation in the sac.

I am of the opinion, that all cases of Ranula may be permanently cured, by the simple operation of introducing the lead Ring, and allowing it to remain ten or twelve days. The ring, in my judgment possesses great advantages over the probe as recommended by Cooper and others, from the fact that the latter would be very easily dislodged, while the ring could not be displaced until desired.

CURDON BUCK, M. D.,

NEW YORK.

The painful anxiety concerning the health of this distinguished surgeon has at last culminated in his death. This sad event occurred on the morning of March 6, ending a long and useful career. He was born in this city, May 4, 1807. After a very careful and thorough preliminary education, his parents destined him for mercuantile pursuits, in which for a time he became engaged in this city. Such not being congenial to his tastes, and having an ardent desire to study medicine, he afterwards became a student in the office of the late Dr. Thomas Cock, and was formally matriculated in the College of Physicians and Surgeons, graduating from that institution in the spring of 1830. Immediately after this he entered the medical division of New York Hospital, passing through the usual grades of interneship.

Naturally ambitious to improve every opportunity for study and practice, he became one of the attending physicians to the N. Y. Dispensary, then in the infancy of its usefulness. While serving in that capacity an accidental circumstance determined his future course. A child was brought to him from Westchester, suffering with stone in the bladder. The desire to relieve the sufferer prompted a thorough study of the case. So interested did young Buck become in this study that he determined to be a surgeon rather than a physician. Having made up his mind upon the subject, he appreciated his opportunity, and operated upon the patient. From that time a new field was opened before him—a field to the successful cultivation of which he devoted his best energies.

In 1835, with a desire to take advantage of extra facilities for study abroad, he left this country in a sailing vessel, dividing up an absence of two years in the medical centres of France, Austria, and Germany. On his return to New York, in 1837, he was appointed Attending Surgeon to the New York Hospital, which position he held up to the time of his death. On the death of Kearney Rogers he was made Attending Surgeon of the New York Eye and Ear Infirmary, which position he occupied for nine years. When the St. Luke's Hospital, of this city, was being founded, he was the trusted adviser of the managing board, and the subsequent perfect administration of this noble charity has been in no small degree due to his individual exertions. After its organization he was appointed Attending Surgeon, the duties of which position he continued to discharge until 1868, when he resigned to accept a similar connection with the Presbyterian Hospital. He remained in active connection with this institution until a few months ago,

when his rapidly failing health rendered him unfit for duty.

As a surgeon Dr. Buck was remarkable for boldness in operating and for thoroughness of detail in after treatment. His patient study of his cases was one of his peculiar traits. To cases of fracture he was particularly attentive, spending not unfrequently the greater part of the day in the wards of the New York Hospital in dressing them. As a result of such painstaking he was enabled to revolutionize the prevailing system of treatment. To his personal study and exertions was due, more, perhaps, than anything else, the enviable reputation which this hospital so long maintained for the brilliant results of this class of injuries. The improvements which he made in the then existing apparatus are matters of surgical history. His method of treating fractures of the thigh by the weight and pulley was at once recognized by surgeons throughout the civilized world as the establishment of an original principle of the utmost value.

Dr. Buck was not only a bold, but an original operator. The various capital operations which are described in the periodical medical literature of the past thirty-five years abundantly prove the latter statement. Among these, what is now known as Buck's operation for œdema of the glottis holds a deservedly high rank. But in no department did he gain more laurels than in autoplastic surgery. His devotion to this branch, during the latter part of his life, amounted to a passion, and his marvellous successes roused in him an enthusiasm which mocked the increasing infirmities of his age and his rapidly declining health. His work on "*Contributions to Reparative Suryery*," issued only within the last year, fully embodies his remarkable experience, and may be looked upon as the crowning effort of a most notable and distinguished career.

During a second visit to Europe in 1836, Dr. Buck was married to Miss Henrietta E. Wolff, of Geneva, Switzerland, who survives him. He also leaves three sons and two daughters. Two of the sons, Drs. Albert H. and Francis D. Buck, are physicians, and the third, Gurdon S. Buck, is a lawyer—all being engaged in practice in this city.

Dr. Buck was a Fellow of the Academy of Medicine from its organization, and was once its vice-president. He was also a member of the New York Pathological Society, of which he was at one time president, and of the County Medical Society, the State Medical Society, and the American Medical Association. For varying periods in the last thirty years he had been a trustee of the College of Physicians and Surgeons, the New York Eye and Ear Infirmary, the New York Dispensary, and the New York Ophthalmic and Aural Institute.

For the past year or more his health began sensibly to decline, and grave symptoms appeared, which were for the most part referred to kidney trouble. Finally the symptoms of uræmic poisoning became more and more marked, until he sank into coma, in which state he quietly passed away.

He was faithfully and lovingly attended to the last by his trusted medical friends and advisers, Drs. James R. Leaming and Alonzo Clark.

As a man, Dr. Buck was noted for his sterling integrity of character, his high sense of professional honor, his consistent Christianity, his charity to the poor, and his quiet devotion to his family. Can more of good be said of any one?—*Med. Record.*

Dr. J. Marion Sims.—The Courtesies Extended to Him While in Montgomery.

Dr. J. Marion Sims, the distinguished Gynæcologist and founder of the Woman's Hospital of New York, arrived in our city on Wednesday evening, and was escorted to the residence of his brother-in-law, Dr. B. R. Jones, by the committee of four from the *Medical and Surgical Society of Montgomery:* Drs. R. F. Michel, W. C. Jackson, J. B. Gaston and James Berney.

On entering the drawing-room Dr. Michel addressed the distinguished visitor in a few words of hearty welcome and tendered him the hospitality of the society at such time as might be most convenient for him. Dr. Sims replied with much feeling, naming the following Tuesday evening, March 20, for the purpose.

At the hour appointed, the beautiful hall was well illuminated; and the walls decorated with drawings illustrating different important problems in physiology, gave to the entire room a most scientific appearance.

Dr. Sims was presented to the Society by Dr. Michel, when Dr. B. R. Jones, President of the Society, delivered an eloquent address of greeting to their honored guest, to which Dr. Sims responded in a few felicitous remarks.

After these interesting proceedings, Dr. Sims was escorted by the members of the society, in procession, to the mansion of Dr. Baldwin, on Perry street, this gentleman having kindly tendered his house to the Medical Society as the best place for the banquet they had prepared for their distinguished guest.

The company sat down to the table about 10 o'clock, and from then on until a late hour, there was literally "a feast of reason and a flow of soul." In the centre of the table was a beautiful stand of flowers, and above it a wreath in the centre of which, the word "Sims" was most artistically arranged in flowers. Many toasts were offered and appropriately responded to. Altogether the evening was one long to be remembered by all who were present.—*Advertiser and Mail, Montgomery, Ala.*

THE
JOURNAL OF MATERIA MEDICA,
A Monthly Journal Devoted to
MATERIA MEDICA, PHARMACY, CHEMISTRY,
AND NEW REMEDIES.

New Series.] JUNE 15th, 1877. [Vol. XVI.—No. 6.

Probable Relationship of Syphilis, Scrofula, Tubercle, Cancer and other Allied Morbid Conditions.*

By EDWARD T. TIBBITS, M. D. Lond.,
Physician to the Bradford Infirmary.

CONSIDERING the extent and importance of the subject, it will be anticipated that what I have to say must of necessity be of a very fragmentary nature. And although it is impossible to prove the connexion, of which there is a certain amount of evidence, it is a subject pregnant with material for thought, speculation, and, it may be, discovery.

Without attempting in the slightest degree to dogmatise, I would venture to suggest that syphilis has a substantial share in the production of these morbid conditions. Whatever may be the actual relationship, it is quite certain that, to say the least, they have many points of resemblance. If we study their pathology carefully, I think it may be fairly stated that, in all, some portion of the lymphatic system is greatly at fault. And here it will be well to consider briefly the arrangement and distribution of this system. It includes the lymphatic glands, follicles, vessels, capillaries, and "serous canaliculi" described by Recklinghausen. These lymphatics pervade the whole body, being more numerous in those localities where there is the largest quantity of nutritive fluid circulating, consequently where there is the greatest functional activity. They are especially abundant in—(*a*) the mucous membranes, particularly about the lips, mouth, nose, glans penis, anus, and vagina; (*b*) the visceral layer of serous membranes; (*c*) the lungs and liver; (*d*) the ductless glands, comprising the spleen, thyroid, thymus, and supra-renal capsules; (*e*) the vessels of the brain and cord, which are surrounded by lymphatic sheaths.

In the first place we will compare *syphilis* and *scrofula*. Without enumerating the various conditions found in either state, do they not attack almost identically the same portions of the body? Hydrocephalus often appears with hereditary syphilis. Sometimes hydrocephalus attacks one member of a family and syphilis another. Rosen mentions a case of hereditary syphilis in a girl, eleven years old, who had suppuration of glands and caries of bones. Many foreign authorities of high standing in the profession do not hesitate to pronounce many scrofulous diseases in children as the result of syphilis in the parents—e.g., Hey, Hufeland, Mahon, Bertin, &c.; and it is very probable that observation in this direction is conducted with greater facility abroad than in this country. Baumé relates instances in which syphilis in the parents was followed by hydrocephalus, caries about the knee-joint, phthisis, and glandular swellings in different members of the family. Syphilitic parents have been known to produce children some of whom were syphilitic, others scrofulous, others healthy.

In both diseases, whatever be the explanation, there is a tendency to phthisis, although much stronger in scrofula. From comparatively recent investigations made on animals by Drs. Burdon-Sanderson and Wilson Fox, it appears that a "something," indistinguishable histologically from what is generally understood as "tubercle," can be produced artificially by irritation of the lymphatics. And so in syphilis, when there has been undoubted irritation of the lymphatics, it is not uncommon to meet with a very similar condition in various parts of the body.

Glandular enlargement used to be considered pathognomonic of scrofula (before so much attention was bestowed on lymphadenoma); and and yet Dr. Wilks says, "In the lymphatic glands, especially those of the neck, we have now long been in the habit of looking for signs of constitutional syphilis." Mr. Hutchinson says, "Syphilis, in all its stages, produces special and wholly peculiar lesions; and although these may *easily* be mistaken for struma, they have in reality nothing whatever to do with

that state of constitution." I believe they may *very easily* be mistaken, and in some cases the diagnosis is decided by the result of our inquiries into the history of the patient. If there is any suspicion of syphilis, we have to do with a syphilitic affection; if not, a scrofulous one. If must be remembered that although pemphigus is peculiarly a syphilitic disease when occurring in infancy, it certainly does not always present the color which usually belongs to syphilitic eruptions. Another mark of syphilitic eruptions which does not always hold good is, that they do not itch. I have now under my care two indubitable cases of syphilis in which there is great itching present. Dr. Wilks relates the case of a boy whom he considered scrofulous; but after some time he treated him with mercurial inunction and iodide of potassium, and because he rapidly recovered the case was regarded as syphilitic. Here it was quite certain that the lesion would answer to the description of either disease, the diagnosis being ultimately settled by that most fallacious of all tests, treatment. It cannot be said that the connexion between syphilis, lupus, keratitis, and scrofula can be altogether ignored at present, until we have more numerous and reliable statistics regarding the history of such cases.

Although Mr. Hutchinson and others see in syphilis a great resemblance to the exanthemata, it appears to me that it has many more points of resemblance with scrofula as regards lesions, pathology, and treatment.

Secondly. Is there any intimate relationship between syphilis and cancer? I have seen two or three cases of extensive ulceration about the female genitals. One was syphilitic, and I believe another was epitheliomatous; I do not remember the third. As far as outward appearance went, there was no notable difference. but I did not examine by the aid of the microscope. Out of this arises the following question viz., Is it possible in every case, at any stage of the disease, to distinguish syphilitic ulceration, rodent ulcer, and epithelioma, in certain situations? Although Mr. Erichsen does not suggest that syphilis has anything to do with the production of cancer, he says that he knows of no greater resemblance than that which syphilis bears to cancer. We have no direct evidence of syphilis being the cause of cancer; at the same time, both these diseases are closely allied to other members of this group, and hence probably to one another.

Thirdly. Many now grant that "tubercle"—i.e., lymphatic overgrowth—is only a variety of scrofula. Wilks considers it a secondary form of scrofula.

Fourthly. Cancer and tubercle appear to be nearly related, for the following reason:—(1) They not unfrequently attack members of the same family, but not the same individuals. (2) Cancerous and tubercular peritonitis are in some cases indistinguishable; so it is with cancer and tubercle of the lymphatic glands. (3) The rare event (related by Paget in his Lectures on Surgical Pathology) of arrest and almost complete recovery from scirrhus of the mamma connected with the evolution of tuberculous disease. De Morgan considers this indicative of an antagonism between the two diseases. Mr. Bryant mentions a case in which he removed a cancerous breast; the patient recovered with a healthy cicatrix, but died eighteen months afterwards of phthisis. The supposed antagonism between tubercle and cancer may be simply a a kind of counter-irritant or derivative action, so that scirrhus of the breast might arrest in this manner the tuberculising process of lung tissue in its vicinity, or *vice versa*. Certain it is, in many cases of phthisis, glandular enlargement appears to act as a safety-valve, and thus suppresses, retards, or diminishes the activity of the pulmonary disease. (4) Sir James Paget describes some tumours as mixtures of cancerous and tubercular masses, and he affirms that the microscope will ensure a diagnosis, which appears somewhat doubtful in the present day.

Fifthly. Primary cancer of the lymphatic glands is not to be distinguished from lymphadomatous glands. Wilks calls it lymphoid cancer. *Lymphadenoma* in its typical form is said to be general hypertrophy of the lymphatic glands, accompanied usually with enlargement of liver and spleen. Sometimes both are enlarged, sometimes one, sometimes the other, sometimes neither the one nor the other. Trousseau says that in three only out of eleven cases which came under his care was there *any* enlargement of liver or spleen. *Leucocythœmia* is probably the same disease, for, like the former, it may be accompanied with splenic enlargement, when it is called "splenic," or with lymphatic glandular enlargement, when it is called "lymphatic leucocythæmia." On referring to the variously-named cases recently detailed at the Clinical Society of London, it appears to me that they differed only in name. I would merely call attention to one or two points. In Dr. Gowers' case we have albuminous urine, hard fibrous or caseating glands, lardeceous degeneration of spleen and caseous infractions, general lymphatic overgrowth. Dr. Greenfield relates a case of lymphadenoma with an increase in number of white corpuscles; at the same time he says the number of corpuscles

(pale) is not large enough for true leucocythæmia. And, further, he thinks this case is not true lymphadenoma; hence he recommends another name for this intermediate disease—viz., "anæmia lymphatica." Dr. Goodheart details a case which he suggests may be lymphadenoma, or leucocythæmia splenica, or a mixture of both disease. Is it not natural to inquire whether there is necessity for so many names in cases so similar? Is the diagnosis of leucocythæmia to rest on the *number* of pale corpuscles in the blood? I would ask, what is the proportion of pale corpuscles to red ones in a normal state? Some authors say one to forty, others one to four hundred. If there be such a wide difference in what is considered healthy blood, it would be desirable to know the proportion of the pale to the red ones in typical leucocythæmia. Is it no longer typhoid fever because the rose-colored spots are too numerous, not numerous enough, or altogether absent? Certainly, if new diseases are to be formed on such data as these, a fresh list might be issued daily from all parts of the country. *Addison's disease* is very like the diseases just mentioned, especially as it is frequently connected with tuberculous degeneration of the supra-renal capsules, which are very like lymphatic glands, and abundantly supplied with lymphatics.

(*Continued in next Number.*)

A Word in Defence of Sugar-Coated Pills.

BY PROF. J. B. MOORE, PHILADELPHIA, P. A.

It is by the practical experience and close observation in the sale and use of medicines of this kind that this question or problem of solubility or insolubility can be settled, and it is only upon this kind of testimony that any man, either physician or pharmacist, can base an intelligent judgment, and not upon hypothesis or the idle speculations of theorists, whose opinions are often like "airy nothings."

Even the coating of pills with silver and gold leaf, which was at one time so much in vogue, has been found by experience not to interfere with their solubility. Prof. Parrish, in his "Pharmacy," page 802, 1864, remarks, "Since the issue of the former edition of this work, the ancient practice of coating pills with silver and gold leaf has been revived." Same volume, page 803, he also says, "The former belief that a coating with metallic leaf, if sufficient to hide the taste and smell of the pills, would interfere with their solubility, has been very much modified by recent experience."

We want for testing the relative solubility of sugar-coated pills or of any other kind of pills in the alimentary canal, not test-tubes, tumblers or other utensils and artificial gastric juice, but what we want for this important purpose are living human alimentary canals. The pill which may be most soluble in artificial mixtures might be the last to return to its elementary condition in the gastric and intestinal fluids.

This question is strictly within the domain of the careful and intelligent therapeutist and the experienced and close observer of the action of medicines upon the human organism; and the hospital, dispensary and private practice of the physician are fields pregnant with opportunities for experiment.

The action of the various secretions of the alimentary canal, and the influences that are at work in that living crucible, are in a great measure shrouded in doubt, and in the present state of science inscrutable to man. We can only imperfectly judge of their action by certain phenomena and results.

Besides, the materials, of which pills are usually composed, will much more quickly dissolve or liquify in the fluids of the alimentary canal than will ordinary alimentary substances. In the former there is not that obstinate cohesion to overcome in order to reduce to an absorbable condition, that would be presented by the muscular fibre and vegetable tissue and other tough and insoluble parts of alimentary substances. Almost any pill-coating or pill-mass will dissolve and readily disintegrate by simple maceration for a few hours in water at the temperature of 100°, with occasional agitation, whereas you might soak a piece of beef steak or cabbage for some time before you would reduce it to a state of fluidity.

There is still another very important circumstance in the history of the digestive process, which seems to have been overlooked, or its importance not properly estimated in the consideration of this subject, and that is the length of time a pill, under ordinary circumstances, would be likely to be subjected to the solvent and digestive powers of the fluids of the alimentary canal in its passage. It is estimated by physiologists that alimentary substances average from one to two days in their transit along the intestinal tube, and from two to five hours or longer are spent in the stomach. This slow passage and long maceration in the corroding juices of the canal must insure, beyond peradventure, the thorough solution of any pill-coating or pill-mass, unless of adamantine hardness. If hyperæsthesia of the intestinal tube or other morbid condition should exist which may accelerate

peristaltic movement, of course a more rapid transit would be likely to take place. But again, there are frequently inactive and comparatively stagnant conditions of the intestinal canal, in which a pill may loiter for days or even longer.

The great length of the intestinal tube, which is about six times the length of the entire body, with its numerous convolutions and varied secretions, is wisely provided by nature to adapt it to the work of a thorough digestion and absorption of indigestible alimentary matters, etc.

Upon inquiry I find that the materials most generally employed by sugar-coated pill manufacturers for making their coating, is sugar and starch, only a few add a trace of gum Arabic. It must therefore be evident to every intelligent pharmacist or other persons having a knowledge of the solvent power of aqueous fluids, when maintained at the temperature of 100°, over any mass composed of such materials, that even the simple maceration of a pill in the juices of the intestinal canal, for from 24 to 48 hours, under the influence of the constant agitation of peristaltic action, leaving out of the question gastric digestion, would be sufficient to dissolve any pill-coating made of the above materials, even if the intestinal fluids possessed no greater solvent power than simple water.

Since the opposition to sugar-coated pills started, several manufacturers of gelatin-coated and "compressed" pills have loomed into prominence. The chief virtue upon which these manufacturers base their superiority over sugar-coated pills, and ask for them a preference, is their asserted greater solubility, and it is this assumed merit alone which, with judicious advertising, has secured them a pass-port to a certain amount of favor among physicians.

Now, I am for progress always, and the profession will find me an ever zealous advocate of any change in the form of any remedy that will augment its therapeutic virtues or render its administration more easy, and which carries with it real improvement; but to introduce a change or multiply forms simply for the sake of novelty, or to gratify whims or caprice, which will at the same time complicate the business of the pharmacist and lead to confusion, such innovations I shall ever oppose to the extent of my feeble influence.

The "compressed" and "gelatin-coated" pills, in my opinion, are simply novelties, and very expensive ones at that, especially the former. I have never heard complaints urged against the oval shape of the gelatin-coated pills, which, however, I deem objectionable, as rendering them difficult to swallow, but I have heard customers complain of the flat form of the compressed pills, rendering them more difficult to swallow than that of the round sugar-coated pills. Where there is one person that could more readily swallow a flat or oval body, there are fifty who would prefer to swallow a round one.

As the compressed or gelatin-coated pills possess no real therapeutic superiority, nor any advantages in point of ease of administration over the ordinary sugar-coated pills, I consider their introduction seriously objectionable. Such innovations only tend to entail greater trouble and annoyance upon both the physician and pharmacist, complicate the business of the latter and lead to confusion with the former, without conferring compensatory advantages upon either. To keep a full stock of all the varieties of compressed and coated pills would involve an amount of capital almost equal to that required to furnish the ordinary stock of a small retail drug store.

If physicians and pharmacists continue to give their sanction and encouragement to the popularization of every new-fangled novelty, in the shape of anybody's coated pills, there is no telling where this thing will end. They will be likely to increase and multiply *ad infinitum*, until the coated pill business will soon become as great a nuisance and as troublesome to pharmacists, if not more so, than the "Elixir" business was, which some members of our profession complained so bitterly of.

If these pills were prescribed by the generic titles of "compressed" or "gelatin-coated," without the name of any particular manufacturer being specified, then the trouble and annoyance to the pharmacist would not be so great. Many of our wholesale manufacturers of pharmaceutical products have recently engaged in the manufacture of both compressed and gelatin-coated pills, and as many more, I have no doubt, will soon enter these "fresh fields and pastures new," and if the thing takes, there is no telling how many more will get at it. And all of course anxious to introduce their particular make of pills, will flood the entire domain of both physic and pharmacy with circulars to induce physicians to prescribe and pharmacists to buy their products. So, as I have said, if we are to keep a full assortment of everybody's make of compressed and gelatin-coated pills, in addition to our regular and staple sugar-coated stock, what are we to do? It will soon be necessary for us to not only increase our capital stock, but also to enlarge our places of business to afford increased accommodations for their storage.

I have, in common, no doubt, with many others of my brethren, already experienced a fore-

taste of the inconvenience and trouble that the advent of these new varieties of pills are likely to cause. Every once in a while we receive a prescription for somebody's compressed or gelatin-coated pills, which perhaps are for some impecunious individual who possibly has hardly the means to buy bread, and we are compelled to send out to some remote pharmacist, whose peculiar location gives him sufficient demand for these sporadic pharmacals to warrant him keeping a stock of them on hand. We there procure these pills, and pay so high a price for them that we are obliged, in the majority of cases, to charge almost the same price for them without any compensation for our trouble and annoyance. For if we were to charge a reasonable profit, our customer would accuse us of extortion while the physician would come in for his share of censure for prescribing such high priced remedies. Thus, the price alone I consider a very serious objection to these pills.

The gelatin-coated pills, although somewhat higher priced than the sugar coated, yet are much more reasonable than the compressed. As an illustration of this, I will here quote the net list prices of a manufacturer, whose compressed pills have attained prominence and are very generally prescribed by physicians in this city, comparing them with the net prices of sugar-coated pills of our leading manufacturers.

	Compressed.	Sugar-coated.
Compound cathartic pills, per hundred,	$1.12	25 to 30 cents.
Sulphate of quinia, 1 grain, "	1.57	70 to 95 "
Lady Webster's pills, "	1.12	25 "
Compound rhubarb. "	1.12	38 "

Thus it will be seen that the prices of compressed will average about four times the price of the same kind of sugar-coated pills of our best manufacturers. And what is this enhanced price all for, which every man, woman and child will have to pay, when these pills are prescribed? It is simply, in my opinion, for the shape of the pill, which I consider not so good or desirable as that of the sugar-coated pill.

These prices I regard as excessive, considering the cost of the material, labor and time in manufacturing. Now, if there was any earthly advantage therapeutically in these pills over the sugar-coated ones, there would then be something to justify the physician in prescribing them; but it will require some stronger evidence to convince me of their superiority than the mere asseveration of their patentees or manufacturers. We want, in my opinion, no better pill than the sugar-coated, when it is properly made. Sugar-coating, when well done, is the very *acme* of elegance of all forms of coating.

So far as the sugar-coating of pills is concerned, I believe that all of our more reputable manufacturers vie with each other in the beauty, elegance and perfection of their coating, and also pay due regard to the solubility. This they would do for the sake of their own reputations and for the popularity of their products. There are, I have no doubt, some who might not be over-conscientious about substituting cinchonia for quinia or podophyllin for extract of jalap, in the pill-mass, and who would not deign to spoil the coating for the sake of saving a few cents. This would be too like "spoiling the ship for a shilling's worth of tar."

I have no fear myself of the solubility of pills in the alimentary canal, whether they be coated with sugar or gelatin or compressed. What I would dread more than anything else in ready-made pills would be the deception and fraud which might be practised by dishonest manufacturers in the selection and proportionment of the ingredients. Although, I must confess, that I have much faith in the probity and conscientiousness of most manufacturers, and believe the sugar-coated pills of our leading houses to be about as reliable as any other class of pharmaceuticals which we buy ready-made, and which we have no means of ascertaining the quality of by convenient and reliable tests. We, of course, with sugar-coated pills, as with extracts, fluid extracts, powders, etc., have to rely upon the honesty of the manufacturers for their purity and proper proportions of the materials used in their fabrication, and the care and skill employed in their production.

The only plan that can be adopted by the pharmacist to avert the danger of the deception to which he is liable by the faulty composition of ready-made pills, is for him to make in his own laboratory all his own pills, and then send them to some skillful and reliable person and have them coated to his own order, if he has not the facility for doing so. By this means he can always feel assured of the quality of his pills, and can recommend them to his customers and to physicians with confidence. This, in fact, every pharmacist should do, not only with sugar-coated pills, but with every pharmaceutical preparation he sells that he is capable of making properly.

Unfortunately, however, too many pharmacists, like the retail clothier, buy their goods ready-made—a practice too reprehensible to need comment. Of course there are some preparations for which the demand is too limited to warrant the pharmacist in making; the time, trouble and waste of material in the preparation of so small a quantity would often deter him, and very justly too, from the task. But all pharmaceuticals, for which there is a reason-

able demand, should be made by the pharmacist himself.

Before quitting this subject, it may not be improper for me to address a word or offer a few suggestions to the manufacturers of sugar-coated pills, although what I may offer may not be new to many.

In coating pills of asafœtida, iodide and protocarbonate of iron, or those containing camphor, myrrh, phosphorus or any of the volatile oils, or in fact, any volatile or readily oxidizable substance, the greatest care should be exercised to avoid exposure to too high a temperature. The desiccation should, I think, be conducted in a dry atmosphere, at the ordinary temperature. This would involve a longer exposure, but it would entail less risk of partial decomposition or volatilization of the active ingredients. And in all pills containing such or similar substances, would it not be well to first give them a coat of tolu before that of sugar is applied? Would not such a plan aid very greatly in preserving such pills from change or loss of activity when long kept? With the fear of that awful "bug-bear" of insolubility before their eyes, sugar-coated pill manufacturers often commit the error of coating their pills before they are properly dried. In consequence of this, the moisture often soaks through the coating, the pills become discolored, often taste of the ingredients and are unfit for sale. All pills should of course be dried with care, preparatory to coating, but unless they contain any volatile or oxidizable substances, rapid drying to the proper condition for coating can do them no possible injury.

The object of this paper is to show the injustice and to demonstrate the utter fallacy of the tirade against sugar-coated pills.

In order to convince my readers of the sincerity of what I have said, and to attest my faith in the powers of the *human* alimentary canal to dissolve any properly made sugar-coated pill, I make the following offer: I will present to any chemist, physician or pharmacist in the United States, as a reward of merit, the sum of *twenty-five dollars*, who will manufacture a pill-coating from the same kind of materials, and in the same proportions, and by the same process usually adopted by our best manufacturers of sugar-coated pills which will render a sixth, quarter and half a grain morphia pill, or the officinal compound cathartic pill, insoluble and inoperative, and fail of producing their characteristic therapeutic effects when properly administered, under any physiological conditions of the system or alimentary canal in which these same kinds of pills *will* display their usual medicinal effects when *freshly* made and uncoated.

I wish it to be understood that in writing this paper I have "no friends to reward nor enemies to punish"; I merely write in the interests of science, my profession and for the welfare of the sick. In writing upon such an important subject, I feel it incumbent upon me, as it should be upon any one, to speak the truth and give expression to my honest convictions, "hew to the line, let the chips fly where they will."

I have given this subject much thought and careful consideration, and have treated it in this minute and thorough, and, I hope, impartial manner which its importance demands; and should I have, inadvertently, made any erroneous statement, I shall be most happy to have any physician or pharmacist who may be more enlightened upon the subject than myself, to correct me.

Philadelphia, Pa., February, 1877.

For the Journal of Materia Medica.

Protagon.

BY CHARLES G. POLK, M. D., PHILADELPHIA, PA.

The interest which has been bestowed upon this brain element during the last three months has been very considerable. A casual notice of it in the November number of "New Remedies" awakened inquiry and investigation; the consequence has been that its intrinsic merit has led one physician to recommend it to another so that it may now be said to have won for itself a high and permanent place in the list of remedial agents. The natural questions are, what is Protagon and what purposes does it subserve in the cure of disease? Protagon is a combination of albumen, phosphide of nitrogen and tribasic hypophosphorous acid with some glycero-phosphate, normally associated with brain glycerine. The precipitate we obtain when we precipitate the protagon from an alcoholic solution contains three distinct principles—kephaline, lecithine and myaline. The kephaline isolated from the other principles is found to be an albuminoid rich in the phosphide and the hypophosphite of nitrogen, and very soluble in warm glycerine, especially if acidulated with hypophosphorous acid; the lecithine and myeline consist of glycero-phosphate, and are less valuable as therapeutical agents.

The kephaline is by far the most important of the three; it seems to be really the food of the brain, and of the nervous system; upon its adequate supply and proper formula the entire

series of brain and nerve phenomena is dependent; if it be modified in its quantity or quality, aberration of vital action must necessarily follow. Chemical analysis of the blood, brain and spinal cord of those dead with tubercular disease reveals an obvious deficiency. The uniformity of the deficiency in these cases suggested a direct relation between the deficiency and tuberculosis, as cause and consequence, and reasoning from this conclusion I conceived the thought that the remedy was to restore to the system the missing element, and the cause removed the effect would terminate. I determined to try this theory in practice. For eighteen years I have been testing the remedial powers of protagon, obtained principally from the brain of the cow, and the conclusions I here state are the conclusions arrived at from careful observation of the agent in more than a thousand cases.

It is preeminently a brain tonic, imparting vigor to all the functions over which the nerve masses of the cerebro-spinal axis are concerned. The brain worn out and exhausted by intense, intellectual pursuits, long and persistent grief, or harrassing anxieties, rapidly regains its former vigor when fed with this pabulum of the brain. Times too numerous to mention have I seen it recuperate a constitution which at first seemed irreparably shattered. In cases of nervous prostration its remedial powers place it preeminently above every other agent in the Materia Medica. In chorea, and in paralysis, not dependent upon organic lesions, it has in my experience been very useful. But the class of diseases in which I have derived the most decided benefit from its use is that termed tubercular, among which may be named tubercular disease of the lungs, mesenteric glands, Bright's disease of the kidneys, and Addison's bronze disease (tuberculosis of the supra-venal capsules of the kidneys), and hip-joint disease.

I find by using it myself I can perform more than twice the amount of hard brain work than I can without. I am confident that it is a powerful renovator of lost brain and nerve power. Were its therapeutical value limited to this field it would be one of the most valuable contributions to the healing art of which the nineteenth century can boast; but its curative results are not less striking in that very prevalent and hitherto incurable disease, tubercular consumption. It has been pretty surely demonstrated by myself and others, by histological and chemical examination of those dead with phthisis, that there is an evident deficiency of the combination of the tribasic hypophosphorous acid and phosphide of nitrogen. If kephaline does sustain the high relation to brain and nerve power which I claim for it, and all recent investigations strengthen this view, it is quite axiomatic that it wields an immense influence over both animal and vegetable life. It is the formula of phosphorus prepared by the alembic of the human organism as the essential type from which all other phosphorus compounds are to be elaborated. Liebig did not exaggerate the value of phosphorus when he said, "Without phosphorus there is no thought," and Prof. Horsford uttered a broader and grander truth when he avowed "Without phosphoric acid there is no life." Moreover, it must also be remembered how protean and changing is phosphorus and all its oxides, that each of them have the property of uniting with one, two, or three atoms of a base, forming mono-basic, bibasic and tribasic acids. Phosphorus burned in dry oxygen produces the mono-basic variety, but if decomposed with nitric acid, the tribasic acid results. Phosphorus boiled in milk of lime produces the *mono-basic hyphosphorous acid*, but will develop the tribasic variety if extract of beef be mixed with the water: or if phosphorus be decomposed under water by a current of the binoxide of nitrogen we get the tribasic variety of hypophosphorous acid, or if pure lard oil be saturated with phosphorus, and an adequate amount of Valentine's beef juice be added, and the phosphorized oil be subjected to the action of perfectly dry oxygen, a compound consisting of phosphide of nitrogen and tribasic hypophosphorous acid will be produced identical in all its chemical attributes with the white, glistening, granular brain element, kephaline.

[*Continued in next number.*]

Æsculus Glabra.

(*Ohio Buckeye.*)

This is an extract from New Remedies, written by I. J. M. Goss, A. M., M. D., of Marietta, Ga., to be published by C. E. Ware & Co., St. Louis, Mo.

The Æsculus Glabra, like its congener, the Æsculus Hippocastanum or Horse Chestnut of England, is a large tree which grows in rich alluvial bottom lands along the Ohio river. It has small flowers, with curved stamens, much longer than the corolla, which are of a pale yellow color, and consist of four upright petals. The fruit is prickly when young. The leaves are opposite, pointing outwardly. The leaflets are fine, with serrated or toothed edges and straight veins like a chestnut leaf. The fruit, bark, and rind of the fruit and leaves, all pos-

sess toxical powers in large quantities. The fruit and bark are used in medicine.

Medical Uses.—This remedy has a very wide range of action, but, like all polycrests, it has a central point of action, from which radiates a series of secondary or reflexed actions. This central point of action is upon the portal system and the liver. It resembles collinsonia, aloes, nux vomica and podophyllin in its action upon the portal circulation. It is more powerful than Æsculus Hippocastanum in its action. In congestion of the liver, when accompanied with hemorrhoids, with aching, pinching pains, it may be relied on with confidence. I have used this remedy in quite a number of cases of hemorrhoids with the most positive results. In constipation, with hard, knotty, dry stools, of a light color, it is one of our most positive remedies. In all cases of hemorrhoids, where the tumors are protruding, or internal, and are hard, purple, and very sore, with aching or throbbing, burning pain attending them, the Æsculus may be relied on with confidence. In cases of rectal irritation, attended with soreness, constriction, fullness, dryness, and a sensation as if a stick, splinter, or some other foreign substance was lodged in the rectum, this is the remedy indicated. In prolapsus ani, it may be given internally, while the persulphate of iron is used locally, and these remedies will effect a positive cure. Its action upon the venous system is as undoubted as that of Collinsonia. Its action also upon the mucous membranes is apparent. It acts equally well in cases of congestion of the uterus, especially the congestion of the cervix uteri attended with painful menstruation. In prolapsus, retroversion, induration, and ulceration, after the replacement of the uterus, given internally in small doses of the tincture, it is a valuable remedy, and may be accompanied with other treatment deemed necessary, such as a wash of permanganate of potash, where there is ulceration, and the wash of the persulphate of iron in prolapsus uteri. I use the saturated tincture in doses of from three to five drops, three times a day, and it should never be given in toxical doses.

If the Æsculus is given after the above indications, it will be found a very trustworthy remedy in piles, either external or internal. And as hemorrhoids is a disease that often proves obstinate and exceedingly annoying, we should hail this as a rich boon to the profession, as well as to the subjects of this painful affliction. And again we often meet with obstinate cases of constipation, from a want of biliary secretion, and a state of inertia of the bowels, which are readily overcome by the use of small doses of this remedy, given for a few weeks, three times a day. There are many cases of congestion of the uterus and the cervix uteri, which hitherto have proved quite obstinate to the profession. Many of these cases yield to the constant use of the Æsculus, in small doses, given for a month or two, three times a day. Like all good remedies, it must be given according to its direct indications. All remedies have leading actions upon some tissue or tissues, organ or organs, and if we will ascertain these leading actions we may prescribe for disease with a prospect of success. I have written this work on New Remedies with special reference to the direct action of remedies, not with a view of amplyfying in the field of hypothetical speculation. Those who buy the work will find it a safe guide in the use of new remedies, by which many diseases hitherto regarded incurable, are either cured or very much benefited, but many of them are cured by these remedies.

Successful Treatment of Two Cases of Meningitis by Iodide of Potassium.

BY WILLIAM C. YOUNG, M. D., CAMPBELLTON, S. C.

For Journal Materia Medica.

Case 1st. November 23, 1873, was called to see a negro boy five years of age, of healthy parentage, uniformly well and strong. For three days previous to my seeing him he had complained of considerable pain in his head and had very restless nights, and this morning was seized with a rather hard convulsion.

On the day of my first visit to him the following symptoms were noticed: Aroused only with great difficulty; answers questions with much hesitancy, and lies in a semi-conscious state; tongue somewhat furred, anorexia, thirst, constipation, scantiness of urine, amounting almost to suppression, considerable heat of head, pupils contracted, but sensible to a bright light, which seemed to give him much pain, vomiting, pulse rapid, thready and intermittent, abdomen retracted and painful on pressure.

Ordered purgative dose of calomel followed by castor oil, should the bowels not move; Iodide of Potassium, in five grain doses, four or five times daily; milk diet and lemonade.

24th. Rested well until this afternoon, when he became restless, occasionally uttering sharp groans; tenderness in the epigastric region, but heat of head less than preceding day; extremities cool; bowels open; involuntary passages of both fæces and urine. Treatment continued,

with the addition only that he have two grains of carbonate of ammonia with each dose of Pot. Iodide.

26th. Slept sound and constantly, except for a minute when spoken to; respiration sighing and irregular; head cool; pupils somewhat dilated; pulse less frequent; no dejection since last seen. Treatment—Surface of back of each ear and nap of neck blistered by the cantharidal collodion; hot mustard pediluvia every three hours and oftener should the drowsiness continue; in other respects treatment continued same.

28th. Condition more promising; less coma; no thirst; pulse fuller; pupils react to the stimulus of light; answers questions; still passes his stools and urine in bed.

30th. Continued to improve; retains his fæces and urine; much emaciated.

Dec. 7th. Can begin to walk without assistance; appetite good; discontinued potash and ammonia and gave Tinct. Ferri Mur. gtt. viii. after each meal; made complete recovery.

Case 2d.—A colored male child, aged 18 months, formerly in good health, was suddenly seized with violent headache, vomiting, followed by convulsions. Was called to see him twenty-four hours subsequent to his attack, when I found him unconscious, accelerated pulse, head hot and bathed with a profuse perspiration, thirst, frequent vomiting, pupils contracted, respiration regular, and no retraction of abdomen.

Ordered calomel in purgative doses, Pot. Iodide in four grain doses every fourth hour, and hot mustard pediluvia, cold sponging to face and head; diet to consist exclusively of milk.

26th. Profound coma, convergent strabismus and dilatation of both pupils, which did not contract by a bright light; tetanic stiffness of muscles of neck; respiration labored and irregular; pulse weak, slow and intermittent; no constipation; extremities cool; head less hot; involuntary evacuations of stools and urine. Same treatment continued with the addition of small doses of quinia three times a day; milk punch and soup at short intervals; the back of head and neck and behind each ear for several days kept sore from the effect of vesication with cantharidal collodion.

During the succeeding two weeks there was little change in the condition of patient; treatment the same, save small doses of carbonate of ammonia every four hours.

A little more than two weeks after the treatment had been adopted, convalescence was apparent, and in the course of two months there was complete restoration to health. The only symptom remaining was a little weakness of the lower extremities.

On the Radical Treatment of Uterine Cancer.

Prof. Goodell, of the University of Pennsylvania, believes that it is not only often impossible but is clinically needless to distinguish *intra vitam* the various kinds of uterine cancer. He believes that cancer of the uterus is of all cancers the least prone to infect the system; its victims die not so much from specific systemic poisoning, and from transference to distant organs, as from septicæmia, from embolism, and from the exhaustion induced by pain, sleeplessness, and the bloody or serous fluxes. In cancer of the cervix the indications are either to eradicate the disease, or failing in this to check the excessive discharges, to correct the fœtor and to allay the pain, and thus to prolong life. To effect this he advises removal of the cervix either by écraseur or galvanic cautery. When the entire cancerous mass is not removed by these means, the remaining outgrowths and the underlying infiltrated tissues must be dug out with the finger-nails, scraped off with Simon's spoons, or snipped off with scissors. The resulting deep and funnel-shaped cavity must next be cauterized with fuming nitric acid or the hot iron. This may be done either at the time of the operation or after an interval of a week or so. During the operation, if scraping be needful, the hemorrhage is usually quite free, but in Prof. Goodell's experience it has always yielded to an injection of one part of Monsel's solution to three of water, followed by a sponge tampon lightly packed into the funnel-shaped pit. After the operation there is sharp fever for four and twenty hours or more. On the third or fourth day the discharges sometimes become offensive, and continue so for several days. After the scraping process the stench is invaribly overpowering and must be met by injections of a solution of permanganate of potash, and by large doses of quinine to guard against blood poisoning.

In all his cases Prof. Goodell enforces sexual abstinence, and orders the patients iron and bichloride of mercury as a tonic, arsenic, to repress the tendency to reproduction of the new growth, and ergot to diminish the supply of blood to the uterus. He has now operated on thirteen cases, in all of which life was lengthened and made bearable; in one instance, as he believes, saved for good. The hemorrhages were stayed, the putrid discharges checked, the pains allayed, and the appetite restored, and bed-ridden patients were en-

abled to get up and resume their household avocations. Even when the womb was fixed by the extension of the disease to parts beyond operative reach, much was gained by removing all of the cancer that could be reached. The complexion invaribly cleared up after the operation, and this fact leads Prof. Goodell to think that the so-called cancerous cachexia is due not to a cancerous diathesis, but to absorption from a local cancerous deposit.

Injury to the peritoneum cannot always be avoided during the operation. Karl Braun, however, does not hesitate to include a portion of the peritoneum in order that the hot wire may pass through perfectly healthy tissue. He says he has repeatedly in this way opened into the peritoneal cavity without harm to the patients. In one case, while scraping with the finger-nails, Prof. Goodell opened into Douglas's cul de-sac. No vaginal injections were used, no untoward symptoms arose.—*Med. and Surg. Reporter.*

A Case of Traumatic Tetanus Treated with Large Doses of Tincture of Aconite. Recovery.

BY J. C. THORP, M. D., LEMONT, ILL.

I was called in September 8th, 1876, to see the son of Thos. Setin, a German, aged 14 years, who had received a wound in the ball of the left foot, made by a manure fork.

The history of the case, obtained from the parents, was that the wound had been made one week previous to the time I was sent for; they had paid but little attention to the child as they did not think the wound serious. On the 16th, two days prior to my visit, he was unable to open his mouth, and his neck was stiff.

Upon examination, I found well-marked rigidity of the muscles of the neck and jaws, and the risus sardonicus was characteristic. He was was unable to turn his head or separate his jaws. The muscles of the abdomen were very tense; he complained of great pain in the neck and back; had not slept any for two nights. His only comfort was when placed in an easy chair. His bowels were constipated; tongue furred; pulse, 120; temperature of the body 140° Fahrenheit; difficult respiration; twitching of the thighs, and on raising him up he had a severe spasm, with well-marked opisthotonos. The condition of the eyes indicated that the third cerebral nerve was involved, shown by the fact nhat the muscles which were supplied by this t erve became tetanic and caused retraction of the globe so deeply in the orbit, that the eye was almost lost to view. The wound in the foot presented an unhealthy appearance, resembling hospital gangrene, and was not unlike it in smell. To this I applied dilute carbolic acid. As I never treated successfully a case of tetanus, I was quite anxious in regard to this one. The plan of treatment which I determined to pursue in this case, was the administration of aconite, a tincture of which was prepared by my friend, Mr. Jacob, who is a thoroughly educated druggist, and therefore the drug could be relied on as being good. The dose given at first was *eight minims* every two hours; this was continued for two days without any perceptible impression from the medicine or any mitigation of the symptoms.

10th. I found the bowels constipated. I ordered castor oil and turpentine, and tincture belladonna was applied along the spine. The tinct. aconite was increased to *twelve minims* every two hours. The diet ordered was the most nourishing that could be taken. Strong beef tea, brandy, etc.

11th. The bowels had been opened by the oil and turpentine. Patient slept some during the night; the pulse 100; temperature of the body 102. At times he complained of great pain in the abdomen. Upon raising him up his breath would become hurried and short. This was owing to the imperfect action of the muscles of the feet producing the most painful dyspnœa, which was relieved by laying him back in his chair. Continued the aconite.

12th. Passed a restless night; tongue covered with a dirty fur; pulse 110. I gave him at this, sub. mur: hyd., gr. viij; pulv. opii., gr. ii; pulv. ipecac, gr. iii: misce, divid. into 3 powders; one given once in 3 hours, followed by castor oil and turpentine. The aconite was continued.

13th. He had rested more quietly after the action of the oil; relished his beef-tea; the wound in the foot more healthy. I directed that they should continue the aconite.

14th. General improvement in all the symptoms. He could be moved without producing much pain. Had slept quietly during the most of the night; pulse, 90; temperature of the body, 98. I ordered that the aconite should be continued; twelve minims, once in two hours. Discontinued the use of the belladonna to the spine.

15th. At this visit it was evident that the aconite had begun to take effect. He rested well during the night; had no return of the spasms; the expression of the face improved; he could move the head a very little; the jaws could be opened about half an inch.

16th. Feels more comfortable; no pain; the expression of the face more natural. From this time forward there was marked improvement in all the symptoms. In the course of five days the spasms and opisthotonos ceased; there was no twiching in the lower extremities. I continued the aconite in the same doses once in four hours, except when he was asleep, up to Oct. 1st, after which time the doses were gradually decreased to October 12th, at which time the face had almost regained its natural expression; he could open his mouth about half an inch, and could sit up and take his meals at the table. His convalescence, though slow, has been gradually progressing, and he now is entirely recovered.

Conclusions.

1. Is not tetanus a zymotic disease?
2. Can tetanic spasms be reproduced by the secretions from the wound if applied to other wounds?
3. Why did not the aconite given in the larger doses, and repeated as they were, produce toxic symptoms?
4. Will this *materies morbi* arrest the physiological influence of the remedy on the system?
5. Can we fix the limit to the use of medicine in disease by the amount given to a healthy person?

This case was made so important from the large and continued doses of the aconite that I have thought proper to call the attention of some of my medical friends to it.—*Nashville Journal of Medicine and Surgery.*

The Influence of Digitalis on the Temperature, Pulse, Arterial Tension, and Respiration.

Dr. Alfred Lombard has made this the subject of an inaugural thesis, recently abstracted in *Le Progres Medical.*

As a pupil of Feltz and Ritter, and under their direction, he performed numerous experiments.

The infusion of digitalis was made use of, introduced directly into the venous system. The exact relationship between the weight of the animal and the substance injected was made out. The temperature was taken in the rectum; Marey's apparatus was used to register the pulse; and a special contrivance of M. Feltz was used to register the pulse; and a special contrivance of M. Feltz was employed to measure the arterial tension.

From the researches of the author it appears that first, the most constant effect of digitalis, whether administered in toxical or medicinal doses, is to produce a change of arterial tension. This invariably diminishes directly the digitalis begins to produce its effects. Secondly, the constant and progressive weakening of the arterial tension shows the digitalis acts primarily upon the heart and has a direct effect upon cardiac ganglia. Thirdly, with the diminution of tension the temperature falls step by step. Fourthly, as soon as the system has been brought under the influence of digitalis, the pulse falls suddenly and very considerably. Fifthly, the respiration becomes irregular.

Amongst the various conclusions come to by the author, there is only one which can be considered really new; that, namely, with regard to the seat of action of digitalis being the principal agent in its effects, a direct action upon the motor nervous centres of the heart. The conclusion seems to be well drawn; in any case Dr. Lombard's labors have been conscientious and well conducted, and the results arrived at are supported by a very great number of experiments.—*London Medical Record.*

Authorship of Hydrobromic Acid.

Writers in some of the journals give Dr. J. Milner Fothergill, of the West London Hospital, the credit of its discovery. He has abundantly tested the article and gives it his endorsement, but in his report of its use (*British Medical Journal*, July 8, 1876) he lays no claim to the honor of its discovery, but places that where it properly belongs, to Dr. D. W. C. Wade, of Holly, Michigan. The article was first given to the profession by Dr. Wade in the *Peninsular Journal of Medicine*, February, 1875. The doctor first prescribed it in May, 1874, which was undoubtedly the first time it had ever been ordered. Since that time he has prescribed several gallons of it with the most gratifying success in relieving the cerebral effects of quinine. In addition to this, it is useful in other directions, as the article by Dr. Wade above referred to, suggests: "Effects may be expected from the acid that are not obtained from the bromides. For instance, it appeares to affect the stomach similarly to the other mineral acids—increasing the appetite, aiding digestion, and acting as a general tonic—therefore having a wide range of applicability. Bromine is known to be a powerful antiseptic, and its hydrogen acid, combined with quinia,

cannot be too much extolled in septicæmia. The acid is a powerful refrigerant and sedative, administered with syrup in fevers, with which, among other combinations, may be made the bromide of mercury as an alterative. In fact, the acid alone is a powerful alterative."

Dr. Wade employs this formula for the preparation:

℞ Bromide of potassium....120 grs.
Crystallized tartaric acid 153 grs.
Water.....one fluid ounce.

Mix, and agitate until the potassium salt and the acid are dissolved and the precipitation commenced. Set aside in cold water twelve hours and decant. One part of the bitartrate of potassium that forms is soluble in one hundred and eighty parts of water, so that the result is not strictly pure acid, but for therapeutical purposes it is sufficiently so. In this formula each fluid drachm contains ten grains of bromide. The usual dose is a half drachm, although there is no reason why the amount might not be safely much exceeded.— *Virginia Medical Monthly.*

Phytolacca Decandra in the Treatment of Mastitis.

By A. A. Moore, M. D., Camden, S. C.

In this section of country, as a general rule, only negroes are to be obtained as wet nurses. I dislike to employ them in this capacity for fear that they may be reeking with the fumus of some loathsome disease. Having also an innate and unconquerable aversion to all sorts of artificial feeding of infants, when there is any possibility of avoiding it, I hail with delight any remedy which promises relief from that painful trouble—mastitis.

In the January number (1873) of the *American Journal of Medical Sciences*, Dr. G. W. Biggers, of La Grand, Oregon, reports a few cases of threatened mammary abscess which he treated successfully with the fluid extract of poke-root. Recently, I have had occasion to avail myself of the information he has thus afforded. Notwithstanding the process of hardening the nipples had been resorted to preparatory to nursing, about ten days after confinement the lady's nipples became excoriated and and fissured. For this, compound tincture of benzoin, nitrate of silver, &c., were tried in vain. A few days later, a hard lump was discovered beneath the left nipple, accompanied with throbbing and shooting pains through the gland and down the left arm, and with oozing of pus through the nipple. Heeding this premonition of further trouble, and still hesitating to resort to the antigalactigogue properties of belladonna, for reasons already indicated, I immediately began the administration of fluid extract of phytolacca decandra. I gave gtt. xx every three hours in a wineglassful of water, until the lady had taken altogether nine doses, or about three fluid drachms. By this time, all symptoms of inflammation and abscess had entirely disappeared, and the only remaining source of discomfort was the sore nipples. By the aid of a large nipple shield fitted over a glass base, this trouble has also been overcome.

It is proper to mention, however, that before the patient had taken the last two doses, she began to experience some of the neurotic effects of the drug, such as vertigo, dimness of vision, some nausea, etc. These symptoms, I think, admonish us either to entirely suspend its use, or to administer it at longer intervals.

I will also remark, that the phytolacca did not seem to have any deleterious action on the lacteal secretion, as the infant continued to nurse regularly, and without any ill effects whatever.— *Virginia Medical Monthly.*

Examination of some Commercial Citrate of Iron and Quinia.

In connection with a preceding article, we give an abstract from a subsequent paper by the same author (Mr. B. H. Paul), on the percentage of alkaloids found in commercial citrate of iron and quinia. The British pharmacopœia requires this to contain 16 per cent. of quinia (dry), and the application of the test, as generally performed, is more apt to yield figures in excess than below the true percentage, owing to the reluctance with which the precipitated quinia parts with its water. Mr. Paul examined three samples of the salt. The first was contained in a 1 oz. bottle, bearing the label of a wholesale druggist in London, with the name and address of the firm, and describing the preparation as "Citrate of Iron and Quinine, British Pharmacopœia." On testing this sample according to the official directions, it gave a precipitate amounting to 9.3 per cent., instead of 16 per cent., or little more than one-half of what it should have been. On testing this sample by another method, and carefully extracting the alkaloid by ether, the total amount of the dry alkaloid was 8.96 per cent. A further examination of this alkaloid showed that it was not entirely quinia, but that nearly

one-fourth of it consisted of cinchonidia, with some amorphous alkaloid and cinchonia. The actual proportions were as follows:

Quinia	6.80
Other alkaloids	2.16
Total	8.96

Sample No. 2 was also in a 1 oz. bottle, and bore a similar label and seal as No. 1. By the Pharmacopœia test this sample assayed 11.7 per cent. When tested with ether, the dry alkaloid extracted in this way amounted to 9.7 per cent., and on further examination of this alkaloid, it proved to contain, as in the previous instance, other alkaloids besides quinine, the actual figures being as follows:

Quinia	7.08
Other alkaloids	2.62
Total	9.70

Sample No. 3 was received in a paper package, and had already become somewhat damp. When tested by the Pharmacopœia method it gave a precipitate which in drying gave indications that it was not quinia. This precipitate amounted to 8.87 per cent. The alkaloids extracted from this sample by treatment with ether and thorough drying amounted to 6.96 per cent., and this consisted chiefly of amorphous alkaloids, namely:

Quinia	1.60
Other alkaloids	5.36
Total	6.96

The fact that in two cases the preparations here referred to professed to be in accord with the requirements of the Pharmacopœia, renders these results especially noteworthy.—*Pharm. Jour. and Trans.*.

A New Sign Indicating Respiration in the Newly-Born.

The following is an abstract of a paper by Dr. Gelli, in the *Lyon Medical*:—

In the fœtus the tympanic cavity is closed, the middle ear, deprived of air, is full of a gelatiniform magma, constituting a distinct tissue analogous to the marrow of bone.

If the magma be placed under a jet of water it does not stir, the mass is not disintegrated; the forceps crushes it, but cannot draw it. It is a fine woof, composed of young elements analogous to those found in mucus of rapid evolution, and traversed by numerous blood capillaries. Despite a very advanced putrefaction, in many cases its presence has been established twenty days after death.

When the fœtus has died during parturition, before respiring, the tympanic cavity is occupied and filled with the same gelatiniform magma; *but the mucus is then dense and developed in a characteristic manner. The vascularisation is exaggerated; the hœmorrhagic aspect and the liquefaction of the contents of the cavity point to asphyxia in the passage; the absence of air proclaims death before respiration.*

At birth the first movements of respiration greatly modify, and almost instantaneously alter the characteristics of the ear in the fœtal state. *The gelatiniform magma, formed by a hypertrophic development, and, like œdema of the tympanic mucus, disappears by the retreat of this mucus: the tympanic cavity, closed in the fœtal state, becomes open, and air penetrates it by the Eustachian tube.*

To sum up then :—

1. In fœtal life the middle ear is occupied by a mass (gelatiniform magma) resembling the marrow of bone; the cavity is closed, and contains no air.

2. In death from asphyxia the vessels of the magna are distended, there are evidences of hæmorrhage, the magma itself is liquified; but the tympanic cavity, still closed, contains no air.

3. In death after respiration has taken place the middle ear is open, the magma is absent, the cavity *contains* air.

The foregoing conclusions, if well-established, would have been all-important in the late trial of a widow who was arraigned for the death of five childred born since the demise of her late husband.—*The Doctor.*

Hypodermic Injections of Hernia.

Reporting upon three cases communicated to the *Societe de Chirurgie*, in which strangulated inguinal hernia was easily reduced after the hypodermic injection of morphia, M. Le Dentu observes that in these cases the injections certainly assisted their reduction, but it is doubtful how far they would have succeeded had the strangulation been more decided and of longer duration. If the surgeon is called to the case immediately, the injection may be of use by dissipating the pain and spasm; but if some hours have elapsed, it will be always of less value than chloroform, which enables us to at once recognize whether the hernia is reducible or the operation necessary.—*Atlanta Medical and Surgical Journal.*

Monthly Summary.

Substitute for Citrate of Magnesium.

Mr. Joseph Rhinehard (hospital steward in the U. S. Army), proposes, in the *Journal of Pharmacy*, the subjoined as a mode of preparing a substitute, which he thinks equal to that of the Pharmacopœia in its operation and preferable in the readiness with which it may be prepared:

Take of—

Acidum citricum (in moderate sized crystals)	℥ i.
Magnesii sulphas	℥ ss—i.
Syrupus simplex	f ℥ iii.
Extractum limonis	mv.
Potassii bicarb. (in crystals)	gr. xl.
Aqua pura, sufficient for	f ℥ xii.

M. secundum artem.

The above formula is much cheaper, and contains in a greater degree the required properties of a good, mild laxative than does the officinal solution of magnesium citrate, and also has a very pleasant flavor, the bitter taste of magnesia being entirely absent.

It is also a very expeditious and convenient manner of preparing such a solution, and will, I trust, meet the approbation, of those who have not the time to while away in preparing that (to drug clerks) tedious formula, sol. magn. cit.

The following is my method of preparing it; Place acid and sal Epsom in 12.oz. bottle, then add simple syrup and water and extract of lemon—lastly, add potassium bicarb., and cork ready for use. By using the acid and potassium bicarb. in crystals. the danger of gas escaping is obviated, as gas does not begin to generate before the cork can be firmly secured. *The Druggists' Circular & Chemical Gazette.*

Iron Subcutaneously.

M. Huguenin extends the hypodermic method to the use of iron in some cases of pernicious anæmia. When the alimentary canal refuses to perform its functions he prepares a solution from 5 gm. each of pyrophosphate of iron and ammonium sulphate, in 50 gm. of distilled water, and injects a quantity corresponding to 0.03 gm. (or 0.16 grains) of iron at a time. Very soon after the injection the skin becomes red, œdema and palpitation of the heart are observed; but all these symptoms soon vanish, and generally an improvement is noticeable.—*The Doctor.*

The Stomach in Digestion.

Our readers will remember the case of gastrotomy performed by M. Verneuil last year and which we detailed at length. As we anticipated, the opportunity has been seized to test the facts recorded in the case of Alexis St. Martin, and some interesting observations have been made. The results are given in a paper by M. Charles Richet, read before the Academy of Sciences. The mean acidity of the gastric juice, whether pure or mixed with the food, was about 1.7 *grammes* of hydrochloric acid per 1,000 *grammes* of the liquid. It was never below 0.5 *grammes*, nor above 3.2 *grammes*. The quantity of liquid in the stomach had no influence on its acidity; when the stomach was empty or full of alimentary substances, the acidity was almost invariable. Alcohol increased the acidity of the stomach; and sugar diminished it. If liquids, acid or alkaline, be injected into the stomach, the gastric fluid always tends to resume its normal degree of acidity; so that, an honr after the injection, the stomach has resumed its mean degree of acidity. The acidity is most during digestion, and least when the stomach is at rest, and M. Richet thinks that the sensation of hunger and thirst do not depend on the degree of acidity, nor on whether the stomach be empty.—*The Doctor.*

Membranous Croup.

(*Medical and Surgical Reporter.*) Dr. Alexander Fulton has put into effect the following procedure with success in a case of membranous croup: "I introduced my little finger into the child's mouth, over the tongue, until the epiglottis was reached; then pushed it into the larynx, as I supposed, and still forward, whether beyond or between the vocal cords I do not know. Directly the child took fits of spasmodic coughing, followed immediately by the elimination of mouthfuls of membranous exudations, very ropy, could be drawn like the white of an egg. The result was the child, on the very threshold of death, became animated, the complexion almost natural, the eyes, that were half opened and fixed, opened, and the breathing became less difficult. Relief was experienced until the next morning, when another paroxysm threatened. Again I went through the same procedure, followed by the same good results, and prescribed the following, as recommended by Dr. Thomas Drysdale in a former issue of the *Reporter:*

℞.—Pulv. potassæ chlor.,	ʒ ii.
Syrup lemon,	f ℥ j.
Aqua,	f ℥ iii.

Sig.—A teaspoonful every hour.

Convalescence ensued with complete recovery.

Goa Powder in Cutaneous Cases.

Dr. T. Roberts Baker—(Virginia Medical Monthly, April, 1877.) has an article of considerable length on the therapeutics of goa powder, the active agent of which is thought to be Chrysophanic Acid—He says:—"The favorite mode of applying the powder in tropical countries for skin diseases, is to wet the powder with water, vinegar, or lemon juice, and smear it on the skin; but Dr. Squire says that when thus applied, it speedily dries up, and is easily brushed off or blown away by the breath; hence he thinks it should be applied as an ointment. Dr. Polasne de Champeaux, a French Naval Surgeon, who had to treat a large number of cases of herpes, found this powder to be the only efficient remedy. Dr. Silva, of Lima, says that it is best applied in the form of an ointment, prepared as follows:

℞ Goa powder.....ʒi to ʒ ss.
Acetic acid.....gtts. x.
Lard.....ʒ i.
M.

It has also been used for many years in Cochin China, as a ring-worm powder, and on the Malay peninsula for the same purpose, under the name of "Poh di Bahia;" and the most encouraging results obtained in England, by its use in the treatment of painful eczema, lupus, and cancer.

New Researches on Peptone.

The chemical relationship of peptone to fibrin has been the subject of various investigations. Maly and Thiry obtained results which led them to conclude that both substances differed but little, if at all, in chemical composition, while Möhlenfeld found in peptone a considerably less amount of carbon and hydrogen than in fibrin. In order to arrive at more decisive results, A. Kossel prepared a standard peptone solution, which was divided into two portions, one of which was treated with argentic oxide to remove chlorine. The peptone was now precipitated from both portions by alcohol, and each product analyzed. The percentage composition of the peptone from the original solution was found to be: C 49.08—H 7.00—N 15.17—S 1.16—O 27.56, while that of the other portion was C 45.93—H 6.71—N 15.45—S 0.9—O 31.01. It is evident, therefore, that the treatment by argentic oxide has caused a difference in composition: and both formulæ show a greater discrepancy from the composition of albumen, than had been found by former investigations.—*Pflüger's Arch.*, 13, 409.

Treatment of Enlarged Glands.

Dr. Burchard, presented to the Society a girl eighteen years of age, who had an enlarged gland on the right side of the neck, and said that the case formed one of a large number which were under treatment at one of the city dispensaries. Dr Burchad wished to know the opinion of the Socity in regard to treatment, as he had found that but little benefit followed any special plan thus far tried The case presented to the Society had improved more under the iodide of iron and cod-liver oil than anything else. He had used hypodermic injections of alcohol, acetic acid, iodide of potassium, iodide of sodium, iodine, bromine, carbolic acid, and water, and found that they preved of but little benefit. The injections of water seemed to be of most benefit.—*Nashville Journal of Medicine and Surgery.*

(We have repeatedly derived great benefit from the use of the Elixir Iodo-Bromide of Calcium Compound, in cases of enlarged glands, and invite attention to its efficacy in such conditions of the system.)

Remedy for Headache.

Dr. John E. Lockridge, in the *American Practitioner*, reports that having observed that bromide of potasssium, in twenty or thirty-grain doses, and tincture of aconite root, separately, relieved more cases of headache than any remedies, he experimented with large doses of the drugs combined. For several years he has been in the habit of giving in these cases sixty grains of the bromide of potassium and ten drops of the aconite root, in a wineglassful of water; the same to be repeated in an hour or two, if the head be not relieved; but a repetition of the dose is very seldom required. To patients who wish to have the remedy always at hand, or who are about to start on a journey, he supplies the following mixture:—

℞ Bromide of potassium.....ʒ ij.
Tincture of aconite root.....ʒ j.
Distilled water, Simple syrup } .....aa ʒ ij.

M. S. Take a dessertspoonful in some water every hour, until relieved.

Though he does not claim any charm in the exact dose of these drugs, he does insists that less than a drachm, of the bromide at least, is wholly insufficient.—*The Doctor.*

Sick-Headache.

Dr. H. W. Hendrick, of Hyde Park, Vt., has had excellent success in the treatment of sick-headache, by guarana in powders, grains five to fifteen for a dose.—*Med. Record.*

Nitrous Oxide Gas.

Dr. H. Gibbons (in *Pacific Medical Journal*) thus describes the effects of the inhalation of nitrous oxide gas upon himself:

"I expected to feel its exhilarating effects, which I had many times experienced when inhaling it for amusement. But no such effect was produced; or, if there was, no recollection of it remained. On the contrary, the loss of consciousness was sudden and complete. There was no dreaming or any sense of lapse of time. But a sharp, tinkling sound, barely audible, was the only sensation of any kind. In the next moment, I felt a gentle tap on the hand and heard the voice of the operator, and returned in a flash, as it were, to perfect consciousness. I did not realize the lapse of an iota of time from the inhalation of the gas till the restoration of consciousness, and, of course, was much surprised when Dr. Thomas pointed to the table at my side, saying, "There are your three teeth, Doctor!"

He remarks: Nitrious oxide gas is preferable to ether and chloroform as an anæsthetic, because—

1. It is much more easily administered, and is not unpleasant to the patient.
2. It is more speedy and certain in its action, exhibiting its effect in a definite time.
3. Its anæsthesia is as perfect as that from ether and chloroform, if not more so.
4. It has no disagreeable after effects.
5. It is absolutely safe, limiting its paralyzing power to the cerebrum and sensory tract, and not invading the cerebellum or medulla oblongata.
6. It is adapted to all brief surgical operations.
7. Its anæsthetic effect may be prolonged by renewal of inhalation, say for five or ten minutes, but should not be prolonged indefinitely. It is therefore not adapted for operations requiring a long time, such as ovariotomy.

Treatment of Membranous Croup.

(*American Medical Journal.*) Dr. Watach has had good success with the alcoholic tinct. of eucalyptus globulus in the treatment of membranous croup. In one case a coat of the entire trachea was coughed up. He discards all local applications and orders:

℞.—Tinct. of eucalyptus, . . ℥ i.
Syrup, . . . ℥ iii.

Teaspoonful every hour.

He has given five drachms a day to a child five years of age, and has never known any bad symptoms to be produced by it.

He employs it with benefit in doses of 2 1-2 drachms to five in cases of chronic bronchitis in old people, and in cases of pulmonary gangrene that recovered.

Monobromide of Camphor and Bromide of Zinc in Hysteria.

Dr. Bourneville, who accompanied me on my visit, spoke of the various new substances which he is now trying, under the direction of Dr. Charcot, in cases of nervous disease, and especially of nitrite of amyl, bromide of camphor, bromide of sodium, and bromide of zinc. He is still very well satisfied with the effects of bromide of camphor since his first researches on the drug. It is administered largely at La Salpetrière, in the form either of Clin's capsules or of enemata. In a great number of epileptic cases it has been found to diminish the vertigo most notably, and to diminish in a good many cases the number of fits. It has rendered considerable service in the delirium which follows the fits in epiliptic mania, and has proved very useful in hysteria. I have been promised Dr. Bourneville's observations on the other drugs I have mentioned. I cannot conclude, however, without remarking that the hydropathic and bathing arrangements of such a large and special establishment as La Salpetrière seem scanty and insufficient. This part of the hospital arrangements is so very important in the treatment of nervous affections that it is strange that the Assistance Publique does not understand the good, and even the saving, that would result from greater liberality in the supply of baths.—*Paris Cor. of Lancet.*

Infantile Diarrhœa.

The prevalence, during the summer, of intestinal troubles among children, induces us to publish the following formula, which may perhaps be of some service:

℞—Ipecac Root (broken), ... ℥ ijss.
Aquæ. . . . . ℥ iij.

Let it boil till reduced to ℥ vijss; filter this first decoction; then take the same ipecac and repeat the process. Mix the products of these two decoctions and add five to ten drops of Sydenham's laudanum.

We must remind our readers that great care must be had in the use of laudanum with young children.

As a drink, albuminous water may be given, which the children take very easily. Here is the formula for it:

℞—Albumen Ovi., ... No. iv.
Aquæ., ... O. ij.
*Hydrolat. Flor. Aurantii, ℥ vijss.—M.

It may be sweetened with sugar, simple syrup, or syrup of ginger.—*The Electic Medical Journal.*

*Hydrolats. A watery solution of the active principles of any remedial agent prepared by distillation.

Curious Experiments with a Rat's Tail.

In a paper read the other day to the French Academy, M. Bert tells how he has been trying to clear up some points in the transmission of excitations along sensitive nerves. Accordingly, he takes a young rat, skins a little piece at the end of the tail, and inserts the skinned part into a hole made in the subcutaneous tissue of the animal's back. The connection is completed with the aid of sutures and time, and the rat reconciles itself as best it may to wearing its tail like the handle of a teapot. After eight months the "handle" is cut in two. On pinching the part left in the back, the rat evidently feels pain, and tries to escape. It is thus satisfactorily shown that an excitation has traveled along sensitive nerves in the dorsal part of the tail, in a direction opposite to the normal, those nerves having united with dorsal nerves leading into the spinal cord. This sensibility in the dorsal stump of the tail disappeared in a day or two, and the nerves were found to be in a state of degeneration, owing to separation from their trophic centers. It might have been otherwise, it is thought, had the new connection been prolonged. The experiment, then, is supposed to prove that an excitation at any point of a sensitive nerve is propagated at once in both directions, centrifugal and centripetal; and the same holds probably for motor nerves.—*The St. Louis Electic Med. Journal.*

New Anæsthetics.

A new anæsthetic has been described by M. Rabuteau before the Academy of Sciences, Paris. It is hydrobromic ether, which, he says, can be administered without difficulty, and which is, moreover, eliminated almost completely by the respiratory passages. It holds an intermediate place between chloroform, bromoform and ether. Considering the frequent recurrence of chloroform accidents, any new anæsthetic which promises to yield a greater degree of immunity from danger of a fatal result is worthy of trial.—*The St. Louis Electic Medical Journal.*

Strong Spirits of Camphor in Nasal Catarrh and Hay-fever.

A correspondent advises the following:

℞ Alcohol, 98°..... ℥ i.
Gum Camphor,..... 3 iss.
M

Snuff up the nose, ½ a tea-spoonful, three times a day. In some instances it produces a cure in three or four days.

Picric Acid for the Cure of Sore Nipples.

Dr. Charrier, in the last number of the *Courrier Medicale*, suggests a new remedy in sore nipples. He employs two dilutions:

A Distilled water, 100 grammes; picric acid, 1 gramme, 30. *B.* Distilled water, 100 grammes; picric acid, 1 gramme. He first washes the breast and nipple with tepid water, and than applies to the fissure solution *A*, and after a short time washes the part for four minutes with solution *B*. It does not interfere with suckling, as children continue to take the breast with avidity.—*The Electic Medical Journal.*

Podophyllin in Habitual Constipation.

Dr. Rousselet publishes an article on this subject in the *Gaz. des Hop.*, in which he attributes the ill-success which has frequently attended the use of this remedy, to the employment of a poor preparation. He thinks the treatment should extend two to three months, according to the duration of the constipation, in order to induce regular action of the bowels at a certain time of day. Dr. R. begins with one pill of a centi-gramme (gr. 1-6), increasing to two if necessary, and continuing the amonnt daily during fifteen days. He then gives it every other day for a week, then every three days, and so on, increasing the interval every week or so. Should irregularity again supervene, he recommends the daily dose, diminishing it again gradually as before. The best time for taking the pill is upon sitting down to dinner; and the patient should endeavor to get into the habit of going to stool just after breakfast.—*Medical Times.*

Osmose Plan for Blisters.

The removal of infiltration of the skin is easily accomplished, according to M. Ungerer, by osmose. He had occasion to prove this lately in having to treat an extensive scald on the hand, which resulted in a large and exceedingly painful swelling without wounds. Cold water treatment for 12 hours did not relieve the swelling in the least, and the pain was almost unbearable when the hand was removed from the water only a few seconds. He therefore, made a diffusion experiment, dipping the hand in a saturated salt solution, and the success was surprising. Though the salt solution had not the temparature of the ice water, the pain dimished almost immediately, and in 4 hours blister and pain were both entirely gone. The hand next day differed from the other only by a very slight swelling and redness.—*The Druggists' Circular and Chemical Gazette.*

The Topical Action of Remedies.

Mr. G. R. Sasquet, at the conclusion of a paper on the above subject, sums up his results as follows:

1. A remedy applied to the surface of the body may be absorbed, and may then produce certain direct effects upon the tissues of the part. Probably the local effects of mercury and iodine are examples of this kind of action; perhaps, also, the pustulation of tartar emetic and croton oil is due to an eliminative irritation of the sudoriparous glands.

2. Paralysis of the terminal branches of the motor and sensory nerves, and the arrest of secretion by belladonna, may be explained by a direct action upon the nerve-fibre of the part.

3. Hyperæmia, inflammation, and all the more complex perversion of nutrition produced at the seat of application by remedies, are due to reflex vaso-motor action, usually of the kind at present called inhibitory.

4. "Counter-irritation," and all the other secondary or distant effects of the local application of remedies, are due to reflex vaso-motor action, excited by the primary effect of the application and propagated by means of the nerves.

5. In some cases at least these secondary effects tend to reproduce in kind the impression primarily produced at the seat of application. According to the commonly received hypothesis of inhibition, we should expect this law to apply only to such instances as are mentioned above under No. 2, and not to such local results as are due to reflex vaso-motor action.—*The St. Louis Eclectic Medical Journal.*

A New Method for Administering Kousso.

Dr. Corre, in a communication to the *Bulletin de Therapeutique* (2876, pg, 556) says: "Many have tried to bring kousso into such a pharmaceutical shape, that while its properties as a tænicide remain unimpaired, it may be administered without repugnance. I think the following method, which I have successfully used, accomplishes the purpose. Treat 25 grammes of powdered kousso with 40 grammes of hot castor oil, and afterwards with 50 grammes of boiling water, by displacement; express and combine the two percolates into an emulsion by means of yolk of egg, and add 40 drops sulphuric ether. It may be sweetened with syrup and aromatised to taste. This is taken at one dose early in the morning. The worm is expelled during the third or fourth evacuation, after about six or eight hours.—*Nashville Journal of Medicine and Surgery.*

Ergot in Atony of Bladder.

Medical Times and Gazette.—Prof. Von Langenback, at a meeting of the Berlin Medical Society (Berlin Klin Wach), stated that in atony of the bladder, associated with enlarged prostate, in elderly men, in which the organ is never completely emptied of urine, he has lately tried the hypodermic injection of Ergotine with most surprising results. In three cases the contractile power was increased so as to enable the patient to discharge additional urine, and in a few days it had so augumented that very little urine was left behind. After one or two injections the improvement was considerable, and even a diminution in the size of the prostate seemed to have ensued.

Dr. Israel said that he had derived the same benefit from the employment of Ergotine, and referred to the case of a patient who was thus enabled to hold his water for three hours, whereas before he voided it every ten minutes.

Trade Mark Penalties.

The late Act of Congress imposes very stringent penalties for the protection of trade marks. It provides that any person who shall make, order, or in any way procure the fabrication of a counterfeit trade mark, registered in accordance with the laws of the United States, shall be fined not exceeding $1,000, or imprisoned not more than two years, or both This penalty applies to all those who affix the fraudulent trade mark, or in any way handle it or have it in possession, or fill the package with it on, or handle or have the dies or moulds, brands or any likeness, imitation or fraudulent device of any kind in imitation of a trade mark; or who buy, sell, offer for sale, deal in or have in possession any used or empty box, envelope, wrapper, case, bottle, or other package, to which is affixed, so that the same may be obliterated without substantial injury to the package, any trade mark not obliterated so as to prevent its fraudulent use. Any abettor to violation of the law is to be fined $500, or imprisoned not exceeding one year.—*The Druggists' Circular and Chemical Gazettee.*

Chronic Articular Rheumatism.

(*The Medical Record.*) Dr. Pepper recommends highly the use of Zollikoffer's mixture in such cases, viz: ℞.—Pulv. resin. guaiaci, grs. x; potas. iodide, grs. x; tinct. colchici sem, ♏ 3 gs.; aquæ cinnamon. syrup *aa*, q. s. ad. f ℥ j. S. A.—Teaspoonful to a table-spoonful three times daily.

Croton Chloral in Dentistry.

Dr. C. I. Cleborne (*Medical Journal*) uses croton chloral as an internal and local anæsthetic in toothache. He has derived prompt relief from its use in 5-10 grain doses in the toothache of dyspepsia and pregnancy, and in those aggravating cases which occur in rheumatic and neuralgic patients. Failing to relieve by the ordinary remedies a severe attack of toothache, due to dental caries, I found that a mixture of equal parts of crystallized carbolic acid, croton chloral hydrate and solid Japanese oil of peppermint promptly removed the pain and obtunded all senistiveness during the period of filling. In filling teeth, when it is not necessary nor expedient to destroy the pulp by arsenic or other escharotic, nearly all sensitiveness may be allayed, during the preparation of the cavity, by the following plan: Arm a fine brooch with a small ball of cotton wool, dip it into the mixture, removing any superfluous material by a little pressure; introduce it into the dental cavity, and retain in position by the introduction of a small piece of wool. In the course of five or ten minutes the wool may be removed, and the excavation of the cavity may be proceeded with until it again becomes sensitive, when the application should be renewed, and repeated as often as it may be necessary until the cavity is ready for the filling; a result which may be accomplished with but little or no pain, and without injury to, or the destruction of the nerve.

Gonorrhœa Treated with Indian Hemp.

Dr. M. D. Mooney, of Georgia, says: "I used the following prescription in four cases of gonorrhœa, and was successful in every case, in from five to seven days:

℞—Sugar of Milk..... 3 ss.
Ext. Indian Cannabis.....grs. xx.

Mix well together and divide into 60 powders, one to be taken every three or four hours. This prescription, I am persuaded, will relieve the most obstinate cases in a short time."

Nursing Sore Mouth.

(American Medical Monthly.) Dr. Amor reports an interesting case of nursing sore mouth cured with the *Syrup of Hypophosphites*, after a failure of all the usual remedies, such as iron and quinine, chlorate of potash, etc., together with a nutritious diet. "The tenderness of the mouth, the debility, the distressing sensations in the stomach and bowels, the paroxysms of nervous agitation, and the peculiar pale and languid appearance of the countenance, all rapidly disappeared under the use of this remedy."

A Smokers' Disease.

M. Mauriac, Surgeon of the Hospital du Midi, has just added another to the special diseases of smokers. He has described, under the title of *plaque des fumeurs*, a morbid change of mucous membrane of the tongue and mouth, a special psoriasis. This lesion may degenerate into epithelioma; and according to M. Mauriac, cancer of the lips and tongue has often no other origin than this. Both are common among men, and very rare, as might be supposed, among women.—*London Medical Record.*

Alcohol and Cold.

At a meeting given to the Good Templars of the English Arctic expediton, Mr. William Malley, of the Alert, in relating his experiences said that, among the few men who escaped, scurvy, and did any sleding worthy of notice, were four teetotallers who enjoyed perfect immunity from all sickness, establishing beyond the shadow of doubt that the intense cold of the polar regions could be well endured without stimulants.—*The Druggists' Circular and Chemical Gazette.*

An Enlarged Spleen Extirpated.

Billroth extirpated an enlarged spleen in a woman forty-five years old, the report of which appears in a recent exchange. The incision extended from a hand's breadth above to the same distance below the umbilicus, and the spleen came out readily; there were no adhesions. The gastro-splenic omentum, together with the enlarged splenic vessels, were divided into six portions by strong hempen ligatures double. No blood was lost in cutting away the spleen. The ligatures were cut short, drainage tubes were introduced, and the line of incision was closed with sutures. The spleen was twenty-eight centimetres long, eighteen broad, and eleven thick; its weight was 2075 grammes. For four hours after the operation the patient was very well; she then had a sudden, urgent desire to go to stool, and passed a few very hard fæcal masses, suddenly grew pale, and in consequence of hæmorrhage, both internal and external, died. The autopsy showed that the ligatures, which were put on close to the pancreas, were all stripped off, evidently at the moment when the patient was straining at stool, at which time the pressure in the splenic vein became much increased. The professor proposes in his next case to inclose a small portion of the pancreas in the ligatures, to avoid the above accident.—*Nashville Journal of Medicine and Surgery.*

Podophyllin in Hemorrhoids.

A recent number of the *Gazette des Hôpitaux* contains a communication by Dr. Reviere, in which, after agreeing with Dr. Rousselet in his high estimate of the value of podophyllin in habitual constipation, he goes on to express surprise that the latter had said nothing about the virtues of this drug in hemorrhoids. The action of the drug is simply to cause a soft passage on every occasion. The result is remarkable, but only temporary. The treatment must be kept up for many months in order to gain any permanent benefit.—*Medical Times.*

Treatment of Tetanus.

The tepid bath was employed daily, sometimes for nearly an hour, and had a marked tranquilizing effect. Bromide of potassium was commenced only on the thirteenth day of the illness—which date, if cases of tetanus survived, they often recovered; but the drug seemed to be specially indicated physiologically for the disease. Dr. Wood had recorded the results of treatment by its means in sixteen cases—nine of traumatic tetanus—all of which recovered; and seven of idiopathic tetanus, with five recoveries.—*The Druggists' Circular and Chemical Gazette.*

O. B. Knode regards chlorate of potash almost as sure a specific as we have in quinia in malarious fever, administered alone or in alternation with the vegetable tonic as is quinia, gentian, columbo, etc., or in other cases where there is great sponginess and bleeding of the gums, and mild astringents and tonics seem to be indicated with the mineral acids, the disease speedily begins to feel its magic influence. His favorite prescription is:

℞.—Potassæ chlorate, . . ʒ iv.
Aqua ammonia, . . ʒ iv.

To be well rubbed up in a mortar so that its complete dissolution may be effected. Of this mixture I order a desertspoonful to be given morning, noon, evening and bed time.

Artificial Ivory.

L' Union Pharmaceutique gives the following: Two parts of caoutchouc are dissolved in thirty-six parts of chloroform, and the solution is saturated with pure gaseous ammonia. The chloroform is then distilled off at a temperature of 85° C. The residue is mixed with phosphate of lime or carbonate of zinc, pressed into moulds, and dried. When phosphate of lime is used the product possesses to a considerable degree the nature and composition of ivory.—*Boston Journal of Chemistry.*

Treatment of Dysentery.

Dr. C. E. Steadman, at a late meeting of the Boston Medical Society, said he had been in the habit of treating dysentery with a combination of morphia and sulphate of soda, and had usually found it to quiet the pain and change the character of the discharges after one or two doses. By this treatment the severest cases, in forty-eight hours, seemed to lose their virulence. A short time since he was called to a child between two and three years of age, suffering from dysentery. Starch and laudanum injections, continued for two days, exerted no beneficial effect; after taking one dose of sulphate of soda, three grains, and sulphate of morphia, one thirty-second of a grain, the patient was relieved.—*The Medical and Surgical Reporter.*

Iodine and its Preparations in the Therapeutics of Infancy.

M. Jules, at the Paris Hospital for Children (*Moniteur Therapeutique*) calls attention to the following points:

1. Tincture of iodine must not be applied to children of a tubercular diathesis; it may be diluted with glycerine or some unguent.
2. Iodide of potassium, or iodide of iron is not to be given to children under two years of age, except in cases of acute hereditary syphilis.
3. Iodoform is recommended in cases of ozæna and scrofulous wounds.
4. Albuminuria sometimes follows the external application of tincture of iodine, especially when applied to eruptions. Iodide of potassium has a similar effect, but in a less degree.

Useful Recipes.

We are permitted to transcribe from the private ℞. Book of the late E. Durand, the eminent pharmacist, of Philadelphia, the following valuable formulæ:

DEPILATORY LIQUOR.

℞.—Powd. quicklime..... ʒ ss.
Orpiment..... ʒ i.
Carb. potass..... ʒ i.
Water..... ʒ iv.

Boil for fifteen minutes, and shake well before applying with a sponge. Wash the parts afterwards.

DEBILATORY POWDER.

℞.—Powd. quicklime..... ʒ ss.
Orpiment..... ʒ i.
Powd. starch..... ʒ x.

Make into paste, with water, for use.

Injection of Quinine in Gonorrhœa.

Radha Nauth Roy, Assistant Surgeon, extols (*Indian Medical Gazette,*) May, 1877) the efficacy of injections of quinia in gonorrhœa. He states: "I was once tempted to try it in a case of acute gonorrhœa, where scalding was unbearable, and discharge profuse, and to my utter surprise after the third day I found the man quite relieved. He described to me the shooting effects of the injection as something cold like ice. The discharge was so much diminished that his clothes were scarcely stained after the third day. There was no more incessant desire to void the urine, and he was to all appearances comfortable. My success in this case made me bold enough to use it in other cases, and I have invariably found the disease yield both in its acute and chronic stage under its influence. It acts as a tonic and astringent to the mucous membrane of the urethra. I have also used it in some cases of cystitis with much benefit. I generally use it dissolved in sulphuric acid dil. mixed with rose water. Two grains of quinine sulph. dissolved in acid. sulph. dil. *m* viij. or *m x*, and mixed with an ounce of rose water—to be used twice for injection. At the same time I give copaiba mixture to my patients. In almost all the cases I have found it act like a charm. The disease is generally cured within a week, but chronic cases take a longer time. In a few acute cases it took more than a fortnight, but the delay in them was attributable to their irregular habits during this treatment."—*The Druggists' Circular and Chemical Gazette.*

New Method of Administering Quinia.

St. Louis Med. and Sur. Journal.—Consist in the use of Bromohydric Acid, which prevents the bad effects of Quinia.

In giving quinia in solution Dr. Forrest uses the following formula: Quinia Sulp. 3 j, hydrobromic acid, aqua aa ℥ iss. M. sig. Two teaspoonsfuls contain five grains quinia.

The formula for preparing the acid is as follows: Dissolve ℥ x, 3 vi, grs. xxviii of Pt. Bromide in water oiv., add ℥ xiii, 3 j, grs. xxxvii of tartaric acid. The acid remains in solution, and potassa tartrate is precipitated.

Simple Remedy to Stop Bleeding.

Mr. F. E. Forster, of this city, informs us that lately he cut himself, and trying to stop the bleeding, he did not succeed, notwithstanding he tried to do it in several ways; finally the idea struck him to put on some dry plaster of Paris, which happened to be at hand. It stopped the bleeding at once, while it only caused some stinging sensation, lasting a minute or two, but no ill effects were experienced. He requests us to publish this for the benefit of others, and we do so cheerfully, thanking him for the good example he has set by giving this communication.—*The Druggists' Circular and Chemical Gazette.*

Chamomile in Asthma.

Dr. Barnes, recommendes in the *Phil. Rep.* fumes of chamomile (*anthemis nobilis*) in hay asthma. The fumes should of course, be brought in contact with every portion of the nasal passages, in order to receive the full benefit of the drug. A few coals on a plate and the flowers dropped on it, is a good way of using it. We have often found inhalation of the steam from a fresh infusion useful—*The Doctor.*

Bodily Exercise in the Treatment of Diabetes Mellitus.

We have always recommended out-of-door exercise, and now Dr. Kulz (*Allg. Med. Cent. Zig.*) claims that bodily exercise, if continued for a sufficient period, will cause a diminution in the amount of saccharein excretion in all cases both mild and severe, of diabetes mellitus. He reports seven cases, all benefited. Mere gymnastic exercise within doors exerted little or no influence for good. Climbing hills and mountains was of more benefit. All diabetics should be urged to take much exercise—to fatigue themselves thoroughly every day.—*The Doctor.*

Death from Nitrous Oxide.

The late case in which a surgeon perished under the influence of the gas has been discussed at the Odontological Society and elsewhere. The dentist is exonerated by the fact that the deceased, a qualified surgeon, insisted on taking the gas and directing it to be given till he had "a good snore." It is idle to deny that the gas was the cause of death, and the case should be a warning as to the danger attending all anæsthetics.

Salicylic Acid and Salicine in Acute Rheumatism.

(Virginia Medical Monthly.) Dr. J. S. Wellford's usual prescription is a solution of sixteen grains of Salicylic Acid in one fluid-ounce of Liq. Acetate of Ammonia. Dose, one half ounce every three hours.

Dr. Fairfax has had two successful results from the use of fifteen grains doses of Salicine every two hours.

EDITORIAL.

Bromo-Chloralum in Contagious Diseases.

It is surprising that medical men who have had an opportunity to know of the valuable property of Bromo-Chloralum in preventing the decomposition for a long period of deceased persons, should give way to unnecessary fear, indicated in the following, cut from the *Medical and Surgical Reporter:*

"A writer in the Baltimore *Physician and Surgeon*, last December, went so far as to advocate the passage of a law on the subject (the average American man looking upon a "law" as the cure-all on every occasion.)

He thought it should embody the following provisions:

1. Whenever any one dies of contagious disease, the publication announcing the death should state the cause of death.

2. No person except the immediate family should be permitted to attend the funeral, and the handling and burying the body should be intrusted to persons who devote themselvs to that business.

3. A sufficient number of carriages should be kept for the special purpose of attending these funerals, and the hiring them for other purposes should be prohibited, under the severest penalties.

These are good suggestions, but people should learn to obey them out of a natural sense of sanitary propriety, not out of obligation to a statute"

There is not a case of contagious disease that cannot be rendered comparatively innoxious by it.

SMALL POX, which is the most dreaded, is robbed of its terrors; when applied to the body the virus is decomposed and rendered harmless; used as a gargle for the throat, the pustules are all decomposed and the breath so purified as to emit no injurious odor; used in the chamber utensils that receive the excrements, the contagious matter is decomposed. Used freely upon the person and body, the emanations are so changed as to be comparatively harmless; and when large towels or sheets, moistened, are suspended in the room, with ventilation, little or no indication exists of the character of the disease.

The testimony of those who have had the disease and their attendants, confirm all that is here stated.

In typhus or typhoid fever, scarlet fever, diphtheria, etc., when used freely there is no spread of this disease in families.

In cases of death the corpse should be injected as full as possible with strong Bromo-Chloralum, and the orifices filled with cotton, the body should be wrapped with cotton cloth and kept moist with it, and when placed in the casket, pack the body with cotton-wool moistened with it. All emanations from the body are gases, and instantly these come in contact with the Bromo-Chloralum, are decomposed, and the power to do any injury destroyed. We make these remarks because we have had occasion to give this article a severe trial in such cases, and when there is a method of relieving the anxiety of friends as to danger to others, it is but proper that attention should be called to it.

Mr. VEITCH, Undertaker, of Yonkers, N. Y., writes as follows:

"Upon the suggestion of Dr. PIKE, who is Health Officer in this city, I made use of Bromo-Chloralum when called upon, in my capacity as undertaker, to attend to the burial of a person who had died of small-pox. I have never experienced any ill effects from being in close proximity to this disease, and would not hesitate to be in contact with any contagious disorder, when furnished with this article."

This is fully confirmed by others who are called upon for similar duty.

For Journal Materia Medica.

Typhus and Typhoid Fever.

BY H. ROBERI, M. D., WASHINGTON, LA.

A question very often asked is, whether typhus and typhoid fever are identical diseases. The physicians of the Orient who have peculiar facilities for determining this problem have pronounced negatively, and consider them two different affections.

A distinguished French surgeon, Prof. LANDRRY, in charge of a leading military hospital in Paris, treats the matter as follows:

"Typhoid fever is a disease of the bowels and mesenteric glands, and is very liable to terminate in ulceration. This diseased condition of the intestines is very easily detected by the sensitiveness to pressure of the abdomen, and by a rattling sound in the left side.

In typhus fever all disorders are in the brain and its membranes, no symptoms of a bronchial trouble occurring as in typhoid. The former, moreover, is both infectious and contagious, while the latter is not readily communicated.

In the treatment of both, the most essential requisite is fresh air and plenty of it. Blood-letting is not unfrequently indicated, though the medication used must depend on the peculiarities of each case."

Treatment of Hemorrhoids with Carbolic Acid.

HOLYOKE, MASS., May 19, 1877.

Editor Journal Materia Medica.

Dear Sir—I have treated several cases of hemorrhoidal

tumors, with perfect success, by the injection of from two to six drops of a solution of

Carbolic Acid Sol.	℥ ii.
Olive Oil,	℥ mix.

I refer to drops of the size that fall from the nozzle of a hypodermic syringe. The operation is nearly painless, the tumor over seat of insertion rapidly turning white.

In from two to four days a slough will be formed of size proportionate to amount of fluid injected. The inflammation has been very slight. Ordinarily if a slough be formed in centre of hemorrhoid tumor, involving one-third of its entire substance, the other two-thirds will disappear as the inflammation subsides. If only one tumor be treated at the same time the inflammation will not be sufficient to detain patient from attending to his ordinary duties. And fissures take on healthy action and rapidly heal when touched once or twice a week with a drop of the same solution.

Geo. W. Davis, M. D.

Infantile Colic.

Dr J. P. F. Brunner, of Topton, Berks county, Pa., under date of May 14, 1877, writes as follows: "I frequently have been called to treat cases of infantile colic, and found the use of opiates to produce only a temporary relief, and finally stun the system. I therefore present the profession the following prescription, which I find gives almost instantaneous relief, and effects a permanent cure:

℞—Tinct. Asafœtidæ,	gtt. xv.
Tinct. Cinnamomi,	f ℥ ss.
Sodii Carbonas,	℥ i.
Syrup, Rhei Aromat.,	f ℥ iii.
Aquæ Fontanæ,	f ℥ iss.

M.—Dose, half a teaspoonful every three hours."

External Application in Diphtheria.

The following formula which has been so successfully used in rheumatism, neuralgia, swollen and painful joints, has proved to be equally useful as an external application to the neck and throat in diptheria, where the glands are swollen and painful, reducing the inflammation and giving relief in a short time; also in acute tonsillitis, reducing the inflammation and preventing suppuration. Formula for one pint:

Solution Iodo-Bromide Calcium Comp,	6 oz.
Diluted Alcohol,	7 oz.
Spirits Ammonia,	1½ oz.
Camphor,	1 oz.
Chloroform,	Half oz.
Fluid Extract Aconite,	1 dram.
" " Capsicum,	1 dram.

Should be well shaken before use.

Rub the neck and glands thoroughly with it, and apply also on a flannel cloth to cover the neck and throat completely, and repeat the application frequently. For rheumatism and similar affections, bathe and rub the parts well, cover with flannel.

Croup.

Letter from Dr. Tefft, Topeka, Kansas.

"I drop you a line to say I have never failed to cure a case of croup in thirty-five years' of practice by relying mainly on *ice or ice-water*. The membrane cannot form without heat, and when formed will seperate and fall off and come away, if the parts are *kept absolutely cool.*"

Diphtherine.

The letters we are daily receiving from physicians who are using the Diphtherine fully confirm our own experience; now, only remarks as follows are we justified in publishing:

"Having no case of diphtheria on hand, I use it in sore throat and scarlet fever, with excellent results."

"Your new remedy works well so far as I have tried it."

"The elements of your Diphtherine would be sufficient evidence of its value in diphtheria, but a recent trial in a severe case fully demonstrated its remedial powers."

"Send me at once one pound of Diphtehrine; it does its work well."

"I think your Diphtherine will prove of value in ulcerated conditions of the stomach, given in doses of five to ten drops."

"I am much pleased with the use of the Diphtherine. Its use is by no means confined to the throat. I think observation and trial will give it a wide range of use."

Firwein.

Extract from letter of George W. Holley, M. D.

Niagara Falls, N. Y., April 4, 1877.

"I have used and recommended the use of your Firwein and Elixir Iodo-Bromide Calcium Comp. in Diabetes with good effect."

Extract from letter of Dr. J. H. Simms.

Wilmington, Del., March 29, 1877.

"I find the best results from using your Elixir Iodo-Bromide Calcium Comp., and also the Firwein in Bronchial affections."

Remedial Agents, Reliable and Worthless.

Fluid Extracts and Tinctures.—It is the custom with many pharmacists to prepare their tinctures from fluid extracts, and as nine-tenths of the extracts in the market are themselves no stronger than tinctures, of course such preparations are utterly worthless. Physicians in ordering tinctures should have their prescriptions filled by druggists who prepare them from the crude substances or use reliable extracts, such as furnished by TILDEN & Co., and some few others.

Carbolate of Lime as a Disinfectant.—Experiments on a large scale in New Orleans and other cities prove conclusively that this possesses no power whatever to prevent the spread of epidemic and contagious diseases. It is folly to use it.

Sugar or Gelatine Coated Pills.—Which shall we use? After using sugar-coated pills for years with satisfactory results, we are now informed (by interested parties and some few enthusiasts who jump at everything new), that the gelatine is the only soluble coating. Thorough tests made in Paris years ago, the results of which were published, demonstrated beyond a doubt that gelatine is the *least* soluble of any coating used. When properly prepared, the sugar-coated pills are all that can he desired—elegant in appearance, palatable and soluble.

Macon, Georgia.

From the Druggist's Circular and Chemical Gazette for June, 1877.

Caution to Buyers of Sugar-Coated Pills.

There is an agent traveling for a Chicago house manufacturing sugar-coated pills. Among others he has some sugar-coated compound cathartic pills, of which he left me a sample. As they were offered at a price below the cost of the raw material, my suspicions were aroused, and if any one will convince himself that these pills are as big a fraud as was ever gotten up, let him try the following experiment:

Remove the coating from half a dozen pills and weigh them. You will find that they weigh from 1½ to 2 grains, whereas they should weigh at least 3½ grains. Now rub up a few of the so-called compound cathartic pills in a mortar, and compare the odor of the powder with that of the genuine pill, and then ask whether they can conscienciously be sold to customers.

WM. C. SCHILLER, PH. G.

Baltimore, Md.

Journal Letters.

Extract from letter of J. F. WINSELL, M. D.

BALL'S FERRY, SHASTA CO., CAL., May 21, 1876.

"I like the new style of the JOURNAL very much. It is greatly improved in typographical appearance and the selections are excellent. It is always a welcome visitor in my list of periodicals."

Extract from letter of JOHN J. GAGE, M. D.

PROVIDENCE, MISS., May 8, 1877.

"I have been a subscriber to your JOURNAL for several years, and always look for it with pleasure. I see that it has put on a new dress, which evidently has greatly improved it, not only in appearance, but also in quality and quantity of matter."

Fluid Extracts.

We publish an extract from a letter received from Macon, Ga. We have called attention on several occasions to the half-strength fluid extracts offered at low prices to the trade. Some druggists buy them because the "Doctor don't know the difference," and thus impose upon him. We shall persistently expose this. These persons have lately gone so far in their unscrupulous *enterprise* as to represent that we had abandoned the business; one represents we were dead; another that we were in Europe, and giving no attention to business, hence the quality of our articles had run down, &c.; another, that we had gone into the patent medicine business; in short, any lie that would sell a bill of goods. In connection with these systematic representations, we know several cases where our bottles have been filled with *stuff* and palmed off upon the Profession. These Extracts, when made into tinctures, of course make the tinctures relatively weak.

We have not time in this issue to go as fully into this subject as is proper, but shall do so at another time. Tinctures are usually two ounces crude material to the pint; therefore when the Fluid Extract is different in strength, as some are, not representing even the active principle of two ounces of the crude material, what shall we expect from two ounces of such a preparation put into fourteen ounces of diluted alcohol? The usual dose would be "Homœopathic," and this explains why Physicians are disappointed in results.

Fluid Extracts, in our examinations, we find:—Fluid Extract of Hyoscyamus made 480 grains crude to the ounce; to test by Meyer's method, 760 minims test solution, or one ounce. We have as a standard 775. Those we have examined were 260, 265, 160, 170, 200, 316, 286, 98, 138, 310, 330, 320. Our readers can make their own estimates. Take for instance the one testing 160, divide by eight, the proportion for a tincture, and the tincture would test 20, when it should test 95 at least. We will in the next issue give other illustrations of tests. We republish in this issue some remarks on this point made some time ago.

"*They don't know the difference, they sell just as well, and come cheaper.*"

"Such is the language that greeted my ear from a small office in one corner of a drug store, while waiting a short time since for an article to be put up. Seeking an interview with the stranger when he left the store, I found that he represented your House, and that the remark I had innocently overheard, was made by the proprietor in reply to the remonstrance, that he was supplying the demand for Fluid Extracts which your reputation and efforts had created, with articles of inferior quality and strength, and while admitting the superiority of your preparations, demanded that you should sell your articles at the same price as he could purchase those which, he admitted, were inferior in quality and strength. For 'they (the Doctors) don't know the difference; they sell just as well, and come cheaper.'

"I was astonished; it explained much to me; the more I reflected and dwelt upon the remark, certain was I, that I now had a solution of many disappointments I had met with in the use of Fluid Extracts.

"What surprised and troubled me most was that the difference in dispute, only a paltry five per cent., constituting ten or fifteen cents on a pound bottle, and that for this sum he was willing to tamper with the reputation of the physicians he was supplying, subjecting them to the risk of a disappointment in a case of life or death. The more I thought over the matter, and of the turpitude of the transaction, the more vexed I became, and finally determined I would write you, for I have used your articles for more than fifteen years in my practice, to know if you will sell me a small assortment, put up, such as I need, in small quantities."

We replied that we would most assuredly send in any quantity to any member of the Profession so situated that he could not obtain our preparations at reliable hands.

Complaints similar to these have come to us from other quarters as well as Ohio, where the above letter is from.

We have observed the same want of reliability growing up with Fluid Extracts that existed concerning Powders twenty years ago, before the former were introduced; then the adulteration was carried on to such an extent that purity was the exception, the adulteration being from 60 to 80 per cent. of ship bread or other articles. Select or pure powders were introduced about that time and had an extensive sale, until Fluid Extracts took their place.

We have refrained from saying perhaps what we should have done on this subject, for the reason that our motives might be open to criticism; but the character of the articles put upon the market *styled Fluid Extracts*, and the demand of the trade, that those articles which are of full standard strength, should be sold at the same price as those of half strength, because "the Doctors buy them just as well and don't know the difference," demands they should be told the difference, and then the responsibility will rest with them if they encourage the use or sale of them.

In the preparation of Fluid Extracts we are not guided by what may be accidentally present in the crude material, but by methods which twenty years of experience have taught us, We determine the average amount of active principle which sixteen ounces (Troy) should represent of the various articles, and we ascertain if the same be present in the preparation before it is put in the market. It requires the constant examination of experienced chemists, a record of which is kept. In the same manner have we brought to a practical test the many essays that have been written upon the preparation of Fluid Extracts, as well as Formulæ given, and in all we find the theory very well laid, but process defective in results. We have carried these through in all their details, including the Pharmacopœia processes, and find the same defect in all; that while from 50 to 70 per cent. of the active principle may be obtained, none of them are capable of that complete and perfect exhaustion which is necessary to give in one fluid ounce the active principle of 480 grains of the crude material.

It is equally illustrated in the several tinctures of the Pharmacopœia representing only 40 or 75 per cent. of proper strength.

In the same manner do we examine all other Fluid Extracts put upon the market, particularly those which are offered at a less price than the crude material, alcohol, bottles, &c., of a properly prepared article, would cost; these different preparations refer generally to some remarkable method of recent discovery by which they are prepared, and our aim is to test the theory as well as the article. We have always been ready and we shall continue to explain the entire method to any member of the Profession who can spend a few hours at our Laboratory—and who visits us with proper motives.

T. & Co.

Rockland County Medical Society.

At the annual meeting of the Medical Society of Rockland county, held May 29, 1877, the following officers were elected for the ensuing year: President, Dr. J. J. Stephens, of Tappan; Vice-President, Dr. I. C. Haring, of Clarkstown; Secretary, Dr. William Govan, of Stony Point; Treasurer and Librarian, Dr. I. S. Wigton, of Spring Valley; Censors, Drs. I. O. Polhamus, E. H. Maynard and I. C. Waring; Delegate to American Medical Association for 1878, Dr. William Govan.

List of TILDEN & CO'S FLUID EXTRACTS.

Fluid Extracts represent, with few exceptions, for each fluid pint *sixteen troy ounces* of the crude material, the exceptions being the compounds prepared according to the Pharmacopœia.

That no variations in strength shall occur, and that every article shall represent a given quantity of crude material of ascertained average quality, and to insure uniformity of active principle *we cause an analysis to be made before being put up.*

They are what they purport to be, *fluid extracts* and not *mere tinctures or percolates.*

FLUID EXTRACTS.	In lb. Bottles.	In 5 lb. Bottles.	Dozen, 4 oz.
Aconite Leaves	2 00	1 90	
" Root	2 00	1 90	
Agrimony	1 75	1 65	7 25
Aloes	2 75	2 65	10 25
Angelica Root	1 25	1 15	5 75
Angustura	1 50	1 40	6 50
Arnica	1 90	1 80	7 70
Aromatic Compound	2 25	2 15	8 75
Avens Root	1 50	1 40	6 50
Balmony	1 25	1 15	5 75
Bayberry	1 25	1 15	5 75
Barberry Bark	1 25	1 15	5 75
Belladonna	2 50	2 40	
Bethroot	1 75	1 65	7 25
Bitter Root	2 00	1 90	8 00
Bitter Sweet	1 50	1 40	6 50
Black Alder	1 50	1 40	6 50
Blackberry	1 50	1 40	6 50
Black Cohosh	2 00	1 90	8 00
" " Compound	2 00	1 90	8 00
Black Hellebore	1 75	1 65	7 25
Black Pepper	1 50	1 40	6 50
Bloodroot	1 75	1 65	7 25
Blue Cohosh	1 50	1 40	6 50
Blue Flag	1 75	1 65	7 25
Boneset	1 50	1 40	6 50
Boxwood	1 50	1 40	6 50
Broom Top	2 00	1 90	8 00
Buchu	2 50	2 40	9 50
" Compound	2 50	2 40	9 50
Buchu & Pareira Brava	3 50	3 40	12 50
Buckthorn	1 50	1 40	6 50
Bugle-weed	1 50	1 40	6 50
Burdock	1 50	1 40	6 50
Butternut	1 50	1 40	6 50
Button Snake Root	1 50	1 40	6 50
Canella	1 50	1 40	6 50
Cannabis Indica	3 00	2 90	
Calabar Bean	6 00	5 90	20 00
Calamus	2 00	1 90	8 00
Catechu	2 00	1 90	8 00
Cardamom	6 00	5 90	20 00
" Comp	3 00	2 90	11 00
Cascarilla	1 50	1 40	6 50
Catnep	1 25	1 15	5 75
Cayenne Pepper	3 00	2 90	11 00
Centaury, Red	1 50	1 40	6 50
Chamomile	2 00	1 90	8 00
Cherry Bark	1 75	1 65	7 25
" " Compound	1 50	1 40	6 50
Chestnut Leaves	1 50	1 40	6 50
Cinchona, Pale	2 50	2 40	9 50
" Compound	2 50	2 40	9 50
" Calisaya	4 25	4 15	14 75
" Red	4 25	4 15	14 75
Cinchona, Aromatic	2 50	2 40	9 50
Cleavers	1 75	1 65	7 25
Cloves	1 25	1 15	5 75
Clover, Red	2 00	1 90	8 00
Colchicum Root	2 00	1 90	
" Seed	3 75	2 65	
Colocynth	2 25	2 15	8 75
Columbo	2 00	1 90	8 00
Coltsfoot	1 50	1 40	6 50
Comfrey	1 50	1 40	6 50
Conium	2 00	1 90	
Cotton Root Bark	3 00	2 90	11 00
Cramp Bark	1 50	1 40	6 50
Cranesbill	1 75	1 65	7 25
Cubebs	2 50	2 40	9 50
Culver's Root	2 00	1 90	8 00
Dandelion	2 25	2 15	8 75
" and Senna	1 75	1 65	7 25
" Compound	2 00	1 90	8 00
Dwarf Elder	1 25	1 15	5 75
Elder Flowers	1 50	1 40	6 50
Elecampane	1 25	1 15	5 75
Ergot, See Special List			
Eucalyptus	4 00	3 90	14 00
Fern Sweet	1 25	1 15	5 75
Fever Few	1 50	1 40	6 50
Fever Bush	1 25	1 15	5 75
Fire Weed	1 50	1 40	6 50
Foxglove	1 75	1 65	
Frostwort	1 50	1 40	6 50
Garden Celandine	1 50	1 40	6 50
Gelseminum	2 50	2 40	
Gentian	1 50	1 40	6 50
" Compound	1 75	1 65	7 25
Ginger	2 25	2 15	8 75
Golden Seal	2 00	1 90	8 00
Golden Rod	1 25	1 15	5 75
Gold Thread	2 00	1 90	8 00
Gravel Plant	1 25	1 15	5 75
Guarana			
Hardhack	1 25	1 15	5 75
Hemlock	1 25	1 15	5 75
Henbane	2 50	2 40	
Hop	2 50	2 40	9 50
Horehound	1 50	1 40	6 50
Hydrangea	1 75	1 65	7 25
Ignatia Bean	3 50	3 40	12 50
Indian Hemp	2 00	1 90	8 00
" White	1 75	1 65	7 25
Indian Physic	1 25	1 15	5 75
Ipecac	6 00	5 90	20 00
" and Seneka	5 50	5 40	18 50
Jalap	3 00	2 90	11 00
Jersey Tea	2 00	1 90	8 00
Johnswort	1 25	1 15	5 75

FLUID EXTRACTS.	In lb. Bottles.	In 5lb. Bottles.	Dozen 4 oz.
Juniper Berries	1 25	1 15	5 75
Ladies' Slipper	2 50	2 40	9 50
Lettuce	1 50	1 40	6 50
Lily White	1 25	1 15	5 75
Life Root	1 50	1 40	6 50
Liquorice	1 50	1 40	6 50
Liverwort	1 75	1 65	7 25
Lobelia	1 75	1 65	7 25
" Compound	1 75	1 65	7 25
Logwood	1 25	1 15	5 75
Lovage	1 25	1 15	5 75
Lungwort	1 50	1 40	6 50
Male Fern	1 50	1 40	6 50
Mandrake	1 75	1 65	7 25
" Compound	1 75	1 65	7 25
Marsh Rosemary	1 50	1 40	6 50
Matico	3 00	2 90	11 00
Motherwort	1 50	1 40	6 50
Mugwort	1 25	1 15	5 75
Nux Vomica	2 25	2 15	
Opium, Aqueous	3 50	3 40	
Orange Peel	1 [illegible]	1 40	6 50
Orris Root	1 [illegible]	1 65	7 25
Pareira Brava	4 00	3 90	14 00
Parilla Yellow	2 00	1 90	8 00
Peppermint	1 [illegible]	1 15	5 75
Pink Root	[illegible]	2 40	9 50
" and Senna	[illegible]	1 90	8 00
" Compound	50	2 40	9 50
Pipsissewa	1 50	1 40	6 50
Pitcher Plant	2 50	2 40	9 50
Pleurisy Root	2 00	1 90	8 00
Poke	1 50	1 40	6 50
Poplar Bark	1 50	1 40	6 50
Poppy	1 75	1 65	7 25
Prickly Ash	1 75	1 65	7 25
Ptelea	1 [illegible]	1 40	6 50
Quassia	1 [illegible]	1 40	6 50
Queen of the Meadow	1 50	1 40	6 50
Rhatany	2 00	1 90	8 00
Rhubarb	4 00	3 90	14 00
" Aromatic	3 75	3 65	13 25
" and Senna	3 00	2 90	11 00
Rosin Weed	3 00	2 90	11 00
Rue	1 50	1 40	6 50
Saffron	4 00	3 90	14 00
Sage	1 50	1 40	6 50
Sarsaparilla, Rio Negro	2 50	2 40	9 50
" and Dandelion	2 50	2 40	9 50
" Compound	2 50	2 40	9 50
" American	1 75	1 65	7 25
Sassafras	1 50	1 40	6 50
Savin	1 25	1 15	5 75
Scullcap	2 50	2 40	9 50
Scullcap Compound	1 75	1 65	7 25
Seneka	4 00	3 90	14 00
Senna Alex	1 50	1 40	6 50
" Compound	2 00	1 90	8 00
" and Jalap	3 00	2 90	11 00
Senna Aqueous	1 50	1 40	6 50
Skunk Cabbage	1 25	1 15	5 75
Snakeroot	3 00	2 90	11 00
Solomon's Seal	1 50	1 40	6 50
Southernwood	1 50	1 40	6 50
Spearmint	1 25	1 15	5 75

FLUID EXTRACTS.	Dozen, 4 oz.	In lb. Bottles.	In 5 lb. Bottles.
Spikenard	1 50	1 40	6 50
Squill	1 50	1 40	6 50
" Compound	3 50	3 40	12 50
Stillingia	2 50	2 40	9 50
" Compound	2 50	2 40	9 50
Stone Root	1 75	1 65	7 25
Stramonium	1 75	1 65	
Sumach	1 25	1 15	5 75
Sweet Gale	1 25	1 15	5 75
Tag Alder	1 25	1 15	5 75
Tansey, Double	1 25	1 15	5 75
Thyme	1 25	1 15	5 75
Tonqua	3 00	2 90	11 00
Turkey Corn	3 00	2 90	11 00
Turmeric	1 25	1 15	5 75
Unicorn	3 00	2 90	11 00
Uva Ursi	1 50	1 40	16 50
Valerian	2 00	1 90	8 00
Veratrum Viride	2 50	2 40	
Vervain	1 25	1 15	5 75
Wahoo	2 25	2 15	8 75
Water Pepper	1 25	1 15	5 75
White Oak	1 25	1 15	5 75
Whitewood Bark	1 25	1 15	5 75
Wild Indigo	1 50	1 40	6 50
Wild Turnip	1 50	1 40	6 50
Wild Yam	1 50	1 40	6 50
Wintergreen	1 25	1 15	5 75
Witch Hazel	1 25	1 15	5 75
Wormseed	1 50	1 40	6 50
Wormwood	1 25	1 15	5 75
Yarrow	1 25	1 15	5 75
Yellow Dock	2 00	1 90	8 00

THE

JOURNAL OF MATERIA MEDICA,

A Monthly Journal Devoted to

MATERIA MEDICA, PHARMACY, CHEMISTRY, AND NEW REMEDIES.

New Series.] JULY 15th, 1877. [Vol. XVI.—No. 7.

New York State Medical Society.

THE ANNUAL MEETING—THE PRESIDENT'S ADDRESS—APPOINTMENT OF COMMITTEES—OTHER MATTERS.

The Medical Society of the State of New York convened in the Assembly Chamber yesterday morning at eleven o'clock. There was an attendance of over one hundred members. The session was opened by prayer by the Right Rev. Bishop Doane, of this city.

The president then proceeded to read his opening address in which he congratulated the members of the Society on its prosperity, and suggested for still further advancement that the presiding officers be selected with the more single purpose of getting a good active servant of the Society who will carry out its work with impersonal energy; that the presiding officer should carry out and be responsible for the work of the Society at the meeting over which he presides; that the address which usually occupies the Wednesday evening session be discontinued, or at least the penalty of $25 for failure to deliver it be abolished; that the Secretary's annual salary be increased to $500, or that the editorship of the Transactions be separated from the duties of the Secretary, and given to an editor; that each volume of the Transactions hereafter should have a copious index; that a list of delegates by counties with the time of election and expiration of service should precede the list of permanent members, and be kept up with official accuracy, so that the true character and construction of this body as a society of delegates should be more prominent, and that the Treasurer should receive compensation for the time and labor required of him by the society.

The President further said that he has during the year signed a diploma for Dr. Carl Schade, of Buffalo, and also signed a petition to the legislature for the passage of an act to provide for the sanitary inspection and supervision of common schools and school buildings in New York city. Dr. Frank H. Hamilton, of New York, has been appointed to the vacancy in the delegation to the American Medical Convention.

The President announced the following committees;

Hygiene—Drs. J. Foster Jenkins, of Westchester; C. R. Agnew, of New York; John T. Van Alstyne, of Columbia; James C. Hutchinson, of Rensselaer; Taber B. Reynolds, of Saratoga; E. M. Lyon, of Clinton; Edwin Hutchinson, of Oneida; J. R. Stockwell, of Oswego; T. H. Squire, of Chemung; J. G. Orton, of Broome; C. G. Pomeroy, of Wayne; Harvey Jewett, of Ontario; and C. C. F. Gay, of Erie.

Credentials—Drs. Wm. Manlius Smith, of Onondaga; G. H. Blake, of Livingston; A. N. Saunders, of Madison.

Reception and Arrangement—Drs. E. R. Hun, Wm. H. Bailey, of Albany; A. W. Tucker, of Washington.

Business—Drs. Geo. Burr, of Broome; S. F. MacFarland, of Chenango; R. H. Ward, of Rensselaer.

Ethics—Drs. Wm. C. Wey, of Chemung; Austin Flint, of New York; Frederick Hyde, of Cortland.

Nominations—Drs. A. Hutchinson, of Kings; P. R. H. Sawyer, of Westchester; C. E. Witbeck, of Albany; J. M. Rose, of Herkimer; L. A. VanWagnen, of Madison; J. H. Crittenden, of Broome; C. G. Pomfret, of Wayne; T. F. Rochester, of Erie;

A vote of thanks was then tendered the President for his address, and a recess for half an hour was taken for the purpose of organizing comittees, receiving credentials, and for registration of names of permanent members.

On reconvening the Comittee on Credentials reported the members present, and Dr. Bailey of the reception committee introduced the following delegates from other State Societies: Dr. Collins, of the Massachusetts State Medical Society; Dr. Gillett, of the Pennsylvania State Society, and Dr. D. A. Curry of the New Jersey

Society. Dr. Curry, when introduced, made a few witty remarks which were received with applause.

A motion that the nominating committee report a committee on the President's address was adopted.

The treasurer reported the balance on hand at the last report was $287.71; received during the year $1,384.31; disbursed during the year $1,684.19. In the general fund the receipts were $1,922.76, and the disbursements $2,132.31, leaving a balance due treasurer of $209.55: The report was referred to an auditing committee with Dr. Elliott as chairman.

The Secretary, Dr. E. R. Hun, reported the number of Transactions on hand, and the report was accepted.

Dr. Bailey from the Committee on Publication, reported that 1,500 volumes of the Transactions had been printed during the past year.

The reports of delegates to the other societies were then received, and after some discussion on unimportant matters a recess was taken until three o'clock.

AFTERNOON SESSION.

The Society was called to order by the President at three o'clock.

Dr. Rochester, of the nominating committee, reported as the committee on the President's inaugural address; Dr. Ellsworth Eliot, Dr. A. VanDeveer and Dr. H. Jewett, of Canandaigua,

Dr. R. W. Pease, of Syracuse, read a paper on the Recent Improved Methods of Diagnosis and treatment in Urethral Surgery, with tabulated statement of results in forty-five cases. Discussed by Drs. Case, of Oneonta, Wheeler, of Onondaga, and others.

Dr. J. Kneeland, of South Onondaga, read a paper entitled "Two Cases of Sudden Death—Coroner's Inquest." Accepted and referred to the publishing committee. The paper was discussed by Drs. Rochester and Graves.

The chairman of the business committee read by title a paper entitled "An Obituary Notice of James Thorn, M. D.," by R. H. Ward, M. D., of Troy. Referred to publishing committee.

Dr. A. VanDerveer, of Albany, read a paper entitled "Operation for Closure of Cleft of Hard Palate, with report of cases." The paper was discussed by Dr. Goodwilly, of New York, who presented a wax cast of a subject on which he had operated and gave an illustration of the manner in which the operation was performed, exhibiting the instruments used. Dr. Hutchinson, of Utica, also participated in the discussion. The paper was referred to the publishing committee.

Dr. Wm. C. Wey, of Elmira, read a paper entitled "Sanitary Inspection in Schools." Referred to publication committee.

The business committee reported a paper entitled "Hydrophobia; Rabies Canina," by John W. Greene, M. D. of New York. The president read a letter from Dr. Greene, stating that he was unable to prepare the paper on account of professional engagements.

Dr. Wey moved that Dr. Greene be requested to complete his paper within thirty days, and that it be referred to the committee on publication with power. Carried.

Dr. Greene has paid considerable attention to this subject and is thoroughly posted thereon. He is recognized by the profession as an authority on hydrophobia, and his paper will doubtless be a very valuable one.

Dr. Kneeland made some remarks on the subject, and was followed by Mrs. Dr. Mary Putnam Jacobi, of Brooklyn.

Dr. H. T. Hanks, of New York, read a paper entitled "The Forcible and Rapid Dilatation of the Cervicle Canal, for the Cure of Antiflexion." Referred to the committee on publication.

Dr. John Ball, of Brooklyn, read a paper on "Forcible and Rapid Dilatation," etc.

Recess until eight o'clock.

EVENING SESSION.

The society reconvened at eight o'clock.

A communication from Dr. McIlvaine, who was appointed delegate from the Ohio State Medical Society, to this society, was read by the president. Dr. McIlvaine stated that he was not able to attend this meeting and expressed his regrets, etc. The subject was ordered entered on the minutes.

Dr. Thomas R. Pooley of New York, read a paper entitled, "Puerperal Metastatic Iridio-Chloroiditis," which was referred to the publication committee.

The business committee then called for the paper of Dr. A. W. Tupper, entitled, "Ten Years Inside the Medical Society of the State of New York." Dr. Tupper stated that perhaps some of the statements contained in his paper might not suit some of the members and requested that the paper should be submitted to the business committee to see if it contained anything objectionable. The paper was so referred.

The business committee called for the paper of A. McLean Hamilton, M. D., entitled, "Climatic Influence in the Production of Nervous Disease." The president read a telegram from Dr. Hamilton stating that he could not be present.

Dr. S. L. Parmalee, of Watertown, read a paper entitled, "Punctured Wound of Lung,

Diaphragm and Liver, with Recovery," which gave rise to some discussion as to whether the liver was punctured or not. The paper was referred to the publication committee.

Dr. Joshua B. Graves, of Corning, read a paper entitled, "Report of a Case of Fracture of the Base of the Skull; with Recovery." Referred to the publication committee. The paper was discussed by Dr. Hyde, of Cortland; Dr. Becket, of Albany; Dr. Chapman, Dr. Sawyer, of Bedford; Dr. Sherman of St. Lawrence; Dr. Kneeland, of South Onondaga, and Dr. Kendall. The society then adjoined to 9:30 A. M. to-day.

YESTERDAY'S PROCEEDINGS—THE TIME OF ANNUAL MEETING CHANGED—READING OF PAPERS, etc.

The Society reconvened yesterday morning at half past nine o'clock.

Prayer was offered by the Rev. Dr. Upson, of the Second Presbyterian church.

The minutes of the previous sessions were read and approved.

Dr. Wm. H. Bailey, from the committee on reception and entertainment, reported a large number of visitors, who were admitted to seats in the Society.

Reports were then received from the committees on credentials, business and ethics, and after discussion were adopted.

The question of changing the date of holding the annual meeting then came up and gave rise to an extended discussion.

A motion to hold the annual meeting on the third Tuesday of January was finally adopted.

This question disposed of, the reading of papers was next in order, when Dr. Julius F. Miner, of Buffalo, read one on "The Feasibility of Removing the Thyroid Gland in some Cases of Disease," with an illustrative case. Dr. Austin Flint, of New York, followed with one on "Pneumonic Fever; grounds for considering acute pneumonia an essential fever, and not purely a local inflammation." Dr. Mary Putnam Jacobi presented "Two cases of convulsive disorder without convulsions." All of the papers were discussed at some length.

The subject of establishing a committee to determine the qualifications of students in medical colleges, when about to enter the profession, the services to be tendered to such colleges as may desire them, did not come up, owing to the absence of Dr. E. M. Moore, of Rochester, chairman of the special committee, which was to report on the matter.

A motion to postpone the subject for one year was made and carried.

A recess was taken until three o'clock.

AFTERNOON SESSION.

The society reconvened at three o'clock.

Dr. Edward H. Parker, of Poughkeepsie, read a paper entitled "Heredity as a Factor in Pauperism and Crime." The paper was a practical statement of the "Tramp Nuisance" giving statistics, etc. Referred to the publication committee. The paper was discussed by Dr. Wey, of Elmira, Dr. Diamond and Dr. Kneeland.

The report of the committee on the president's address was taken from the table and amended and recommitted to the committee. The report of the committee, with the exception of the portion relative to the appointment of the nominating committee was adopted.

Dr. Ellsworth Elliot, chairman of the committee on the treasurer's report, reported the report as correct and made several recommendations relative to the collection of dues. The report was accepted and adopted.

Dr. J. W. S. Gouley, of New York, read a paper entitled "Stone in the Bladder." Referred to publication committee.

The paper was discussed by Dr. Hamilton, of New York, and Dr. VanDerveer, of Albany.

Dr. George Bayles, of New York, read a paper entitled "Nitrite of Amyl in Pertussis." Referred to publication committee.

Dr. C. H. Giberson, of Brooklyn, read a paper entitled "The Cold Bath in Scarlatina"—Clinical Notes. Referred to the publication committee.

The paper was discussed by Mrs. Dr. Jacobi, and Dr. Kneeland.

Dr. Alexander Hutchins, of Brooklyn, read a paper on "Jaborandi," which was referred to publication committee.

A recess was then taken until eight o'clock.

EVENING SESSION.

The society reconvened at eight o'clock.

Dr A. N. Bell, of Brooklyn, chairman of the committee on Hygiene, read an abstract of the report of the committee, and it was referred to the committee on publication.

Dr. Norman L. Snow, of Albany, read a paper entitled "Pseudo-Membranous Laryngitis:—Tracheotomy:—Relapse and Recovery." Referred to the committee on publication. The paper was discussed by Dr. Goodwilly, of New York.

Dr. C. G. Pomeroy, of Newark, N. Y., read a paper on "Hydrochlorate of Ammonia—Ammoniæ Murias," which was referred to the publication committee. The paper was discussed by Dr. Manlius Smith.

On motion of Dr. Kendall, the rules were suspended, and the report of the committee on

president's address was taken from the table, but not considered.

Dr. Henry G. Piffard, of New York, read a paper entitled "Certain points relating to the Nature and Treatment of Lupus." Referred to publication committee.

The report of the committee above alluded to was then presented and was freely discussed and adopted.

Dr. Ira F. Hart's paper on "Hereditary Transmission of Disease" was read by title and referred to the committee on publication.

Adjourned to 9:30 A.M. to-day.

THIRD AND LAST DAY'S PROCEEDINGS—NOMINATION AND ELECTION OF OFFICERS—OTHER BUSINESS.

The Society reconvened yesterday morning at half-past nine o'clock.

The session was opened with prayer by the Rev. Dr. J. McC. Blayney, of the First Presbyterian church.

Some time was occupied in reading communications from County Medical Societies.

The Committee on Nominations then reported the following officers:

President—Dr. J. Foster Jenkins, of Yonkers.

Vice-President—Dr. Augustus L. Saunders, of Brookfield.

Secretary—Dr. Wm. Manlius Smith, of Manlius.

Treasurer—Dr. Chas. H. Porter, of Albany.

Censors—Southern district, Drs. E. R. Peaslee, New York; E. H. Parker, Poughkeepsie; E. Eliot, New York. Eastern district, Drs. A. B. Whiton, Troy; James L. Babcock, Albany; J. I. Shaver, Little Falls. Middle district Drs. M. M. Bagg, Utica; G. W. Cooke, Otego; C. G. Bacon, Fulton. Western district, Drs. C. C. Wyckoff, Buffalo; H. Jewett, Canandaigua; C. Greene, Homer.

Committee on Correspondence—1st dist., T. A. Emmett, New Pork; 2d, W. I. Townsend, Goshen; 3d, W. S. Seymour, Troy; 4th, T. B. Reynolds, Saratoga; 5th, S. G. Wolcott, Utica; 6th, J. G. Orton, Binghamton; 7th, A. B. Wilbur, Syracuse; 8th, C. E. Rider, Rochester.

Permanent Members—J. S. Prout, B. A. Segur, Kings; A. E. M. Purdy, Wm. Chamberlain, New York; T. Hammond, Dutchess; J. F. Chapman, Westchester; H. March, Chas. A. Robertson, Albany; J. M. Rose, Herkimer; A. Pollard, Essex; W. Taylor, Madison; N. J. Barnett, Oswego; L. J. Ames, Livingston; J. Wiley, Steuben; A. F. Sheldon, Wayne; A. R. Otis, Yates; G. Swinburne, Monroe; J. C. Green, Erie.

Honorary Members—Drs. Samuel C. Bussy, of Washington, D. C.; W. A. F. Brown, of Dumfries, Scotland; S. Weir Mitchell, of Philadelphia, Pa.; Wm. S. Hopkins, of Vergennes, Vt.; Louis Wecker, of Paris, France.

Eligible to Honorary Membership—Drs. Clarkson T. Collins, of Great Barrington, Mass.; Joseph B. Brown, U. S. A.

DELEGATES.

To Pennsylvania State Medical Society—Drs. S. Shove, of Westchester; Wm. C. Wey, of Chemung.

To Massachusetts State Medical Society—Drs. P. R. H. Sawyer, Westchester; J. L. Banks and H. S. Farnham, New York; J. Bates, Columbia; J. F. Miller, Erie.

To Connecticut State Medical Society—Drs. A. Hutchinson, Kings; L. Cross, Schoharie; G. S. Wolcott, Oneida.

To New Jersey State Medical Society—Drs. J. C. Hutchinson, Kings; H. D. Noyes, New York; R. H. Ward, Rensselaer.

To New Hampshire State Medical Society—Drs. W. Govan, Rockland; L. D. Bulkley, New York.

To Vermont State Medical Society—Dr. E. F. Edgerly, Essex.

To Rhode Island State Medical Society—Dr. C. M. Allen, New York.

To Canadian Medical Society—Drs. E. D. Ferguson, Clinton; B. F. Sherman, St. Lawrence; H. G. P. Spencer, Jefferson

To Iowa State Medical Society—Dr. J. Kneeland, Onondaga.

Censor of the Syracuse University—Dr. Wm. H. Bailey, of Albany.

COMMITTEES.

On Prize Essay—Drs. A. W. Dean, Monroe; J. F. Minor, Erie; W. S. Monroe.

On By-Laws—Drs. W. C. Wey, Chemung; W. M. Smith, Onondaga; Wm. H. Bailey, Albany.

On Publication—Drs. R. M. Wyckoff and E R. Squibb, Kings; W. M. Smith, Onondaga; Chas. H. Porter, Albany.

Hygiene—Drs. E. V. Stoddard, Monroe; C. R. Agnew, New York; J. G. Orton, Broome; J. C. Hutchinson, Rensselaer; E. M. Lyon, Clinton; E. Hutchinson, Oneida; H. Jewett, Ontario.

On motion the Secretary deposited a ballot for President, Vice-President, Secretary and Treasurer, who were duly declared elected, and the balance of the report was then adopted.

A motion for the appointment of a proper person to copy the by-laws was adopted, and Dr. Alex. Hutchinson of Kings, was designated for the task.

The Committee on Prize Essays reported by

telegraph in relation to the Merrit H. Cash fund, as follows, "No essays, no fund, no awards."

Considerable discussion ensued on a proposition to pay Dr. A. Hutchinson, the sum of $100 for his essay read at the annual meeting, and it was finally resolved to pay the amount from the treasury of the Society

Dr. Hiram Corliss of Washington county, the oldest physician in the State, being present, was called upon for a few remarks. He rose and after alluding to the change of time for the annual meeting from June to January, said it would be held at so inclement a season as to forbid him at his age against attending. He would therefore simply bid them an everlasting farewell. He warned the Society to beware of breakers ahead, and to so manage its affairs as to elevate the profession. Again bidding them farewell in a voice trembling with emotion, the old gentleman turned and with the aid of a companion walked out. He is nearly ninety years of age.

The order of business being finally concluded, essays were taken up, and the following were read in full or by title and referred to the Committee on Publication:

"Fracture of the base of the skull," by Dr. P. R. H. Sawyer, of Bedford.

"Hæmaphilia," by Dr. James C. Hutchinson, of Troy.

"Experience in shoulder and arm presentations," by Dr Israel Parsons, of Marcellus.

"Cases of wounds of the synovial membrane of the knee joints successfully treated without anti-septic appliances," by Dr. Geo. Burr, of Binghamton.

"Typhoid Infection of Drinking Water," by Dr. E. V. Stoddard, of Rochester.

"Action of Mercury," by Dr. H. N. Eastman, of Owego.

"Opium Inebriety and the Hypodermic Syringe," by Dr. S. F. McFarland, of Oxford.

"Fatty Embolism," by Dr. Wm. H. Bailey, of Albany.

Resolutions of thanks to the various officers were then adopted, and after closing remarks by the President, the Society adjourned to the third Tuesday of January.

Probable Relationship of Syphilis, Scrofula, Tubercle, Cancer, and other Allied Morbid Conditions.

[*Continued from June No.*]

Sixthly. And, further, *tubercle* and *lymphadenoma* must be very intimately associated. In most of Dr. Hodgkin's cases related in the Medical and Chirurgical Society's Transactions for 1832 there was tubercle in lungs, liver, or spleen, and in some of the enlarged glands caseous degeneration had commenced, which Dr. Hodgkin considered a mere coincidence. Caseous degeneration of an enlarged gland has been regarded as a positive proof of the scrofulous nature of the disease, but really it seems to me to be a mark between the great and intimate relationship between scrofula, tubercle, leucocythæmia, and lymphadenoma. Trousseau says that many cases of lymphadenoma seem to arise from, or at any rate follow, long-continued irritation—e. g., ozœna, &c. It is well known that albuminoid infiltration of viscera follows long-continued irritating discharges. I have at the present time under my care in the Bradford Infirmary a girl who has had hip-joint disease for eight years, and who now has immense enlargement of the spleen and liver, great excess of pale corpuscles in the blood, and albuminous urine. Moreover, she has had hæmoptysis and diarrhœa. In the twentieth volume of the Pathological Transactions Dr. Murchison records a case of a man having a phthisical history, in whom, after death, were found enlarged glands, great thickening of the submucous coat of the duodenum (1½ in.), tuberculous bodies in the liver and kidneys, and peritonitis. The Committee on Morbid Growths did not venture to give a name to this state of things. In the same volume Dr. Moxon reports a case of lympho-sarcoma of the cervical glands associated with tubercles in the pleura, and he is obliged to confess that the change was closely allied to, if not identical with, scrofula.

Seventhly. In syphilis, scrofula, tubercle, and rickets, it is very common to meet with what is known as lardaceous or albuminoid degeneration of the viscera; and sometimes this occurs in leucocythæmia. We are told by Dr. Wilks that the jelly-like, translucent material met with in this condition is very nearly allied to that found in colloid cancer, if not in some instances identical with it. Oppolzer calls albuminoid liver colloid liver. Moreover, scrofula and rickets frequently occur in the children of parents who are scrofulous, syphilitic, cancerous, or tuberculous. However, the same morbid conditions sometimes become apparent in the children of very aged or too nearly related parents.

In studying the pathological histology of these diseases, we do not observe any very markedly distinctive characters in the tissues; indeed, with few exceptions, it is difficult to

avoid noticing their general similarity.* By the aid of the microscope, two principal forms of structure are revealed—cells and fibres, varying somewhat in size, form, mode of combination, and arrangement. Generally speaking, their diameter is reckoned by thousandths of an inch. The alveolar arrangement of cells is usually supposed to be pathognomonic of cancer, but some of the sarcomata follow the same arrangement. In any case, it is now thoroughly well established that there exists every possible gradation between simple glandular enlargement and cancer of the glands. It is impossible to say where one begins and the other ends.

In attempting to explain the pathology of these various dyscrasiæ, it is necessary to give an epitome of the supposed functions of the lymphatic system. The "serous canaliculi" observed by Von Recklinghausen in the connective tissue serve to conduct the nutritive fluid to all the delicate tissues. The lymphatic capillaries collect what is not required for the proper nutrition of the tissues, and convey it to the glands by the vessels, there to be purified and elaborated before its entrance into the blood. In this way the lymph and chyle find their way to the spleen, and probably to other ductless glands. Here, more especially in the spleen, although this is doubtless an independent centre of corpuscular formation, it may be that those corpuscles which were formed, or, so to speak, resuscitated, in the lymphatic glands undergo further change, and thus reach their highest stage of development. That there *is* a production of pale corpuscles in the glands is now tolerably certain. As an interesting fact, it has been computed that three-fourths of the ingesta necessary to support daily life flow through the thoracic duct into the left subclavaian vein. I would draw special attention to this fact, as it proves what a prominent part the lymphatic system plays in the process of nutrition.

Although it cannot be asserted that the spleen and other vascular glands are part of the lymphatic system, it may safely be maintained that they are most probably deeply interested in the mechanism of nutrition. Their structure is very like that of a lymphatic gland, and the cells contained within them are identical with the lymph corpuscle. Nor must it be forgotten that the liver is peculiarly concerned in this process of nutrition, hence it is frequently affected in the disorders of which I am speaking. The process of nutrition consists in a constant kind of oozing of the plasma of the blood with its pale corpuscles, and now and then a red one through the walls of the finest capillaries into the lymphatic "canaliculi." Here as much of the fluid is consumed as is necessary for the regeneration of the tissue in contact with it, and the residue passes through minute stomata into the lymphatic capillaries, and so on to the glands. Healthy nutrition of the body is healthy life, which is an unceasing process of decomposition and recomposition. The entrance of nutritive fluid into the lymphatic "canaliculi" must be regulated by the exit of the same from thence into lymphatic capillaries. The supply must be equal to the demand, but not in great excess. When it is remembered with what rapidity tissue changes take place, it is not difficult to realise the possibility of an apparently insignificant cause producing great local and general disturbance. During infancy, up to the age of twenty years, development exceeds degeneration, and with good reason, for the body requires not only nourishment, but material for growth. Here it is interesting to notice that the thymus and thyroid glands, and perhaps the supra-renal capsules, have work to perform for which there is little or no occasion in adult life, consequently with the termination of growth their activity ceases. In the healthly adult the process of waste and repair are evenly balanced, but as the hair becomes scanty and grey and the skin loses its elasticity, the scale is turned in favor of waste, and there are unequivocal signs of decay. In one word, which is rather a difficult one to explain thoroughy although in very common use, the most frequent cause of disturbed nutrition is "irritation." This for the present may be defined as "a disturbance of the normal processes of waste and repair." Effects vary according to the locality, kind, intensity, and duration of the irritation and constitution of the indivdual. Note the effect of lip, tongue, scrotum, mamma. Might we not also ask whether it is not possible for constant gastric irritation, either from excess in quantity or improper quality of food, to terminate in carcinoma? Why are the mammæ, penis, and os uteri so frequently the seats of cancer? Is there not great functional activity, and hence abundance of lymphatics in each locality? It is at any rate strange, although I am very far from saying there is any shadow of proof of cause and effect, but I say it is strange that those very organs which take the leading parts in the production of syphilis should be especially liable to the terribly destructive influence of cancer. Whatever be the reason, it is at any rate worth a passing thought.

*I am much indebted to Mr. John Appleyard, M. B., F. R. C. S., for affording me the opportunity of examining several excellent specimens of morbid tissues, which he has prepared and mounted with great care.

It is not easy to see exactly how "irritation" acts, but in some cases there may be an excessive production of lymphoid cells, retardation, perhaps stagnation, of the current, and disarrangement of the nutritive processes in that part, followed by the same sequence of events in various parts of the body. In other cases the production of the epithelial or other cells may be so rapid and extensive that it outstrips the activity of the apparatus for the removal of superfluous and waste material, hence an abnormal growth in that situation; and in other instances there may be a combination of these processes.

If, then, the essence of these various diseases be a disturbance of the equilibrium between waste and repair, ending in mal-nutrition, to which it must be remembered all these conditions tend, is there not some shadow of foundation for the relationship I venture to suggest? It is matter of observation that plants can be altered to an almost unlimited extent by the character of soil, amount of light, heat, moisture, and by hydridism, and it is equally certain that the habits and characters of animals vary greatly under domestication and other influences Whatever amount of truth there may be in the theory of Darwin, it is quite evident that by varying the circumstances in all sorts of ways it is possible to produce, at any rate, varieties of species. Although great similarity in the midst of diversity is transmitted from generation to generation, it is quite possible that after some centuries the original peculiarity may be materially altered, or altogether practically removed by dilution. However much we resemble our parents in form, temper, and peculiarities of either body or mind, there is a difference, not only in these points, but, probably, in the viscera, and even in the blood itself. There may be many varieties of corpuscles, both physical and chemical, but which at present we are unable to detect. We cannot but perceive that these little discs are very important agents in nutrition. Is it not possible for a certain condition, or modified condition, of corpuscle to be as easily transmitted from parent to child as a special conformation of body, or mental peculiarities or imperfection? Hence it appears probable that the transmutation of syphilis through the generations of four centuries (perhaps many more) should be attended with some transmutation of that complaint. *A priori*, we should expect to see a more marked difference; but this may be explained by the fact that there are, and probably have been in every generation, numerous fountains from which the virus is continually flowing. Alcoholism, in its transmission through several generations, produces a host of nervous diseases far more dissimilar than those which I have mentioned.

Are there not innumerable influences ever at work quite sufficient to account, not only for the peculiarities of bodies and minds as they are transmitted from one generation to another, but also for the variations of disease to which they are liable? Let me enumerate some of these influences; Amount, kind, and purity of air, water, light, food, and clothing; temperature, climate, occupation, social condition, habits of life, density of population, stage of civilization, and nature of soil in locality where the individual resides.

But it may be said, "All this is conjecture; of what use is it?"

1. Let every medical man endeavor to obtain a correct history of such cases as far as time will permit. Much valuable information might be obtained in this manner. Direct physiological investigations are very important, but it is only the few who have time, ability, or inclination to pursue the study of physiology, or the action of drugs by direct experiment, whereas investigations in the direction I have ventured to indicate may be readily undertaken by any one who will take the trouble to do it.

2. That as all these diseases interfere with the nutritive process, it is of prime importance to restore the disturbed equilibrium between waste and repair. This can only be done by strict attention to hygiene, and the appointment of health officers unfettered by the whims and selfishness of local authorities.

3. That, whatever may be its direct influence, it is certain that syphilis produces a habit of body in which these constitutional disorders I have mentioned are prone to occur. Hence we ought to exert ourselves to the utmost to get rid of it by extension of the Contagious Diseases Acts, or any other available methods.

In bringing these remarks to a close, I hope that, however little any one may be disposed to agree with me, he will endeavor, as far as he can, to collect information, especially as regards the history of such cases, and thus increase our knowledge of disease which must be painfully familiar to us all.—*London Lancet.*

Apthæ.

(*Virginia Medical Monthly*).—Cupri sulphus is an excellent old-fashioned application in the severe forms of cancrum oris, apthous ulceration and gangrenous affections of the mouth. Symonds used five grains finely powdered and thoroughly incorporated in half an ounce of honey. It has also been applied in substance.

Protagon.

[*Continued from June number.*]

Another fact worthy of note is, it is only the tribasic varieties of the phosphorus oxides that are organismal, that take part in structure growth and subserve the purposes of vital functions, the other two hydrates being incapable of attaining this standard; consequently it is only the tribasic hydrates that exert a modifying influence upon the human system in health and in disease and consequently the other ones which are not medicinal, are not appropriated by the system.

If then tubercular consumption finds its prime factor in a deficiency of Kephaline, and Kephaline consists of the Phosphide of Nitrogen and tribasic Hypophosphorous Acid, the reason is obvious why the mono-basic hypophosphites have proved of so little value and consequently we must seek the normal formula as the remedy for tubercular phthisis. This is obtained by isolating the white, glistening Kephaline from brain, previously deprived of its cholesterine, distilling the oleo-glycerine from the brain and recombining it with the Kephaline.

Another preparation can be obtained under the name of "Artificial Protagon," has a slightly acid taste and the odor of Phosphureted Hydrorgen, and consists of the tribasic Hypophosphorous Acid developed in glycerine by binoxide o nitrogen, and I will make trial packages for such as wish to try the preparation alluded to; the Hypophosphite of Oleine made by decomposing in lard oil and extract of beef, the Phosphorus by dry oxygen; or any one can make it for himself if he has the requisite chemical knowledge every physician should have, and uses proper precaution against explosions.

The dose of Protagon is one eighth of a drachm best administered in glycerine as in this formula.

℞ Protagon,..... ʒ i.
Glycerine,..... ʒ vii. M.

S. Teaspoonful thrice daily. One drachm of tincture of iodine and two drachms of prophylamin to the above formula, very much enhance the therapeutical value. The above, with Loeflund's Extract of Malt, is about all the remedies I give in tubercular disease of the lungs. This extract of malt is preeminently superior to all other extracts of malt, and I am sure it is an important adjunct to the Protagon. Under their conjoined use the cough, night sweats, emaciation and other symptoms of consumption are almost always mitigated and restoration to health quite frequently obtained.

As a rule I abhor cough mixtures; they quiet the cough, give temporary relief, flatter the patient with false hopes, and then hurry him to the grave. Of all quack nostrums, "Jayne's Expectorant" is the most popular and does the above result in the most decided manner.

2349 Catherine Street, Philadelphia, Pa.

Massage, and its Value to the Practicing Physician.*

BY DR. WAGNER, FRIEDBURG.

TRANSLATED, WITH NOTES, BY DOUGLAS GRAHAM, M. D.

Though massage was partly practiced in the the age of antiquity, yet to Dr. Metzger, of Amsterdam, credit is due for having improved it in a physiological manner, and for having brought it to be acknowledged as a highly valuable method. The physicians of Norway and Sweden have used massage more than any others, and with very favorable results. In France and England this new process of treatment has likewise found some representatives. Until quite recently, however, but little use of massage has been made in Germany.† Our military surgeons have employed it most frequently in acute cases,‡ as it is amongst these that they find cases best fitted for such treatment.

To give a notion of what is meant by massage and its effects, we can say in the words of Berghman and Helleday that *it will simultaneously further and increase respiration, accelerate the circulation, relieve pain, and reduce elevated temperature.*

Concerning the minute subdivisions of massage by many French authors into *effleurage, frictions, petrissage, sciage, fonlge, pincement, malaxation, percussion, hachure, claquement, vibrations*, etc., we will say that most of them may be left out of account, and we may rest satisfied in accepting four manipulations as belonging to massage: (1) *effleurage*, stroking; (2) *petrissage*, kneeding; (3) passive and active motion; (4) *tapotement*, tapping or percussion, which is very proper for tissues of loose consistency. The discrimination of these four different kinds of massage will be quite enough for the physician. The *effleurage*, stroking or friction, comes particularly into use in the acute stage of inflammation, and it is thus: after oiling the parts of the upper half of the inflamed region is stroked from the periphery, in order to empty the superficial veins and lymphatics

*Berliner klinische Wochenschrift, November 6 and 13, 1876.

†In the Weiner medicinische Wochenscrift, No. 45, 1875, Billroth says, "I can only agree with my colleagues, Langenbeck and Esmarch, that massage in suitable cases deserves more attention than has fallen to its lot in the past ten years in Germany."—G.

‡In joint contusions and distortions, sprains.

and so make room for their returning currents. The friction must be extended in a centrifugal direction so as by degrees to come upon the affected parts. Here one will make direct pressure upon the tissues. By this the effusion or inflammatory products will be squeezed into the lymph vessels and by them absorbed. The circulation of the blood is also influenced, for by the emptying of the superficial veins a more rapid stream sets in after raising the hand. By the mere pressure of the stroking hand, as this is the direction of the returning current, a new mechanical power will be added to the blood stream in the superficial veins, which will naturally favor the more distant stream in the capillaries and small arteries. The cutaneous and vaso-motor nerves are also mildly irritated in this manner: a narrowing of the lumin of the arteries will occur, consequently a relative increase of speed of the current in them. Let the same irritation become stronger, and we obtain a relaxation of the muscular coat of the arteries, yet a slowing of the blood stream will not be produced by continued manipulation. Here, then, we have circumstances favorable for resorption, namely, enlarged vessels with stronger and swifter current in them.

Through these direct influences upon the lymphatics and blood-vessels, resorption of the effusion will be hastened; at the same time the swelling and elevated temperature will be reduced. The pain will also be diminished by freeing the sensitive nerves from the pressure upon their terminal filaments. With still greater power will the parenchymatous exudation be driven into the lymph vessels by skillful kneading, especially if at the same time the lymph and blood stream are hastened by a centripetal rubbing.

The *petrissage*, or kneading of a joint or other parts of the body, be it a muscular, or large ecchymosis into the subcutaneous cellular tissue, should be begun by circular rubbing with the ends of the fingers or with the whole hand; then the pressure should gradually be made according to the firmness of the exudation and with regard to the painful places. These manipulations may be done with both hands simultaneously, or, what is better, with one hand we may knead and with the other do the centripetal stroking. By kneading, the exudation will become more fit for resorption, as a crushing of the elementary parts the same takes place. Especially is this seen in the treatment of chronic rheumatic joint inflammation. The hyperplastic tissues will be broken up, the contents of the newly formed blood-vessels will be extravasated, and the later the vessels themselves obliterated, whilst the crushed mass, either with the extravasation or later in the form of fatty detritus, passes into the lymph stream. Although one can attack or destroy by these manipulations, only the superficial strata of the exudation or the inflammatory new formations with their blood vessels, yet the deeper-lying mass will be reached indirectly by the extension of the pressure. The more the contained fluid of the affected mass, the greater will be the value of the hydrostatic transmission of the pressure.

Of great aid to the above manipulations are, from the beginning of the treatment, gently exercised active and passive motions, the effects of which, besides accelerating resorption, are as follows: (1) The prevention of inflammatory stasis. (2) Loosening old adhesions and preventing the formation of new ones. (3) Favoring the entrance of diseased fluids into the lymphatics by changes in the relations of pressure in the different parts of the joint, for the power of pressure can be of value only in the direction of the centripetal stream on account of the valvular condition of the lymph vessels.

The fourth category of massage, *tapotament* so-called, is a simple percussion of the affected parts either with the palm of the hand, the fist,* a little hammer or other similar instrument. By this means one seeks principally to influence the affected nerves or their termination. In what manner the massage acts in this case is not quite clear. In a number of cases it did well in promoting absorption of the exudation from around the nerves. At the same time one can bring into use with good effect the previously mentioned manipulations. In other cases, particularly in neuralgia, percussions may bring about changes in the nerve, producing a temporary stunning which may serve the purpose of definite cure. In paralysis, also, in consequence of general disturbance of nutrition, the effect of these manipulanions will be to nourish the affected nerves.

In enumerating proper cases for treatment by massage I will especially present those which are of importance to the practicing physician. In the first place come joint contusions,† and effusions of blood and serious inflammation connected with them. We know how obstinate

*Much more delicate and agreeable and often more useful percussion is done with the tips of the fingers united, or with the ulnar borders of the hands. In the latter case it is sometimes well to separate the fingers so that their adjacent edges may strike against one another like a row of ivory balls.—D. G.

†The consequences of distortions and chronic rheumatic joint inflammation yield to the usual methods of treatment so slowly that one must be glad to have such a method as massage at his disposal; with this they come to an end comparatively quickly." (Billroth, Weiner medicinische Wochenschrift, No. 45, 1875.)—G.

this kind of injury often is in spite of the most careful treatment with leeches and lead water, rest, and plaster-of-paris dressing, how very often the patience of physician and patient is put on trial. Since I have used massage I have cured all the cases which have presented themselves to me in an astonishing short time, and as yet have seen no tendency to relapse. With regard to the manner of proceeding in these cases I have adhered to the directions of Metzger, and will now bring forward a sprained ankle and its treatment:—

By a jump or misstep a man suddenly experiences a violent pain in one or both ankles; he limps home with difficulty. Arrived there he finds around one or both malleoli marked swelling and pain; it is no longer possible for him to walk. Here, then, we have to deal with a superficial capsule or ligament rupture with moderate effusion of blood. If one is called at this time, before the effusion of blood has added to the serous effusion, the prognosis is extremely favorable.

After oiling the limb, attempt by stroking with both hands in a centripetal direction to empty the superficial veins and lymphatics so as to make more space in them for carrying off the effusion below. Then with gentle rubbing continue to approach the injured parts. These at first are somewhat painful, but stronger pressure can gradually be made upon them. Circular rubbing should then be added, whilst simultaneously with the other hand the vessels above should be emptied. When the centripetal and circular rubbing has been continued for about a quarter of an hour passive motion is then added, and finally the patient is told to move the foot.* The sufferer is usually astonished to find how little pain is left, and how well he can move the joint; he thinks he can at once go about upon it again. It is well now to apply a bandage, and change it every four or five hours. I do not permit such of my patients as can walk upon the injured limb, as most of the operators with massage do, for I believe that in severe cases it is expecting too much of torn ligaments infiltrated with blood. In two cases which I treated, one kept the horizontal position for a short time to begin with, and recovered speedily and favorably; the other, contrary to my wishes walked about after the first manipulation, in consequence of which a considerable effusion in the joint followed. In the latter case there was probably a partial or entire rupture of a small capsular artery. When possible the massage should be applied twice daily, as by so doing a more speedy cure will be obtained. A few days generally suffice in light sprains to restore the joint to its normal condition.

The conditions are similar in the knee-joint, only that the effusion of blood is much more considerable, and serious exudations quickly take place, especially if at the same time a luxation of the patella be present. The energetic use of massage causes these effusions to be absorbed with wonderful rapidity. I have seen such patients with knee-joint distortions attended with marked effusions of blood, who on the day of the injury had the leg immovably bent, the joint distended with effusion, and were whimpering with pain and confined to bed, get up in eight days and go about their business at the end of twelve days. In most of such cases it is quite remarkable that after and sometimes even during the first sitting the violent pain is much lessened and rarely returns.

With effusions of blood into the muscles and subcutaneous cellular tissues energetic massage is indicated, and it usually leads to a speedy cure, as I have several times seen. With fractures in and about the joints, or luxations, though the diagnosis may be doubled by reason of the effusion or inflammatory swelling, massage does well for a day or two at first in dispelling the effusion or swelling.*

Amongst acute inflammatory affections may be mentioned mastitis, which at its beginning can be relieved by the use of massage. Of course, one would not use this treatment if suppuration had taken place. But the case seen on the first day of trouble are those in which massage does well. It is best done by raising the gland with one hand and exercising the manipulations with the other, from the periphery to the centre. By thus elevating the gland the backward flow of the lymph and blood stream is favorable. After practising massage I bind up the breast, at the same time making use of a compress. After one or two sittings the pain is nearly always abated, by degrees the swelling goes down, and usually in a few days the patient is prevented from the danger of a suppurating breast. A certain length of time naturally intervenes before all remaining hardness in

*Much more effectual than the rubbing, to alternate or use with the upward friction is the *petrissage* or *malaxation*, done by grasping the limb with the whole hand and exercising a rotary upward kneading without allowing the hand to slip. To gradually increase the strength of the muscles for walking, as well as the patient's confidence, after time for repair has elapsed, there is nothing so good as acto-passive motion, alternately resting flexion and extension, while keeping the resistance less than the strength of the limb, so that the patient may not recognize his weakness there. This is particularly useful in old sprains.—D. G.

*And thus it would also become a valuable aid to diagnosis. For a skillful manipulator can perceive slight changes of flabby tissues growing firmer, or an abnormally rigid group of muscles becoming more supple and elastic, and thus sometimes foretell improvement before the patient feels it.

The "hide-bound" condition so observable in horses, if sought for, will also be found in persons who suffer from nervous depression and lack of energy. By the use of massage it is not only detected but also most happily relieved, when no organic trouble is the cause.—D. G.

the gland disappears. The conditions for the repression of an inflammatory affection are exceedingly favorable in these cases, as we frequently see when no treatment has been employed, yet it is just on that account that we have in massage an effectual means to aid or imitate those occasional spontaneous recoveries

Among chronic ailments are in the first place joint affections, and these of the most diverse forms. More patience is required in the treatment of these than with acute cases, yet the desired result is certainly obtained much more speedily than when the usual methods of treatment are employed.

With chronic serous synovitis one can usually proceed as with the acute. In the hyperplastic form of joint inflammation the kneading must be practiced with great force. In this case the inflammatory new formation is crushed and made more fit for absorption. In order to hasten this process, active and above all passive motions should be employed; indeed, they should never be omitted in the treatment of any chronic rheumatic joint inflammation.

Many advocates of massage reject entirely forcible stretching under anæsthesia, because frequently in consequence of it new adhesions raise which are even more difficult to break up than the old ones. Others prefer to use violent extensions occasionally only. For a short time at least, I think, one should attempt with more or less powerful passive motion to loosen the adhesions, and if this does not succeed, then more forcible measures can be resorted to. However, in such difficult cases we must be well satisfied if we get a useful limb out of an immovably bent, useless one.

Further use of massage is made in muscular rheumatism. In light, recent cases one or two kneadings usually suffice to cause the pain to disappear entirely. Old and difficult cases naturally take longer. On the whole, rheumatic patients are very much pleased with massage, as after the first sitting considerable diminution of the pain and an agreeable feeling of warmth is felt.

In lumbago* a speedy cure often results from strong kneading and clapping, which almost at once call forth improvement.

Tapotement, or percussion, is particularly useful in peripheral paralyses and neuralgias. At the same time, if possible the affected nerve should be stretched and kneaded, in order to aid in the removal of hyperæmia or exudation, if such be present. My experience in this department, however, is yet limited. In three cases of sciatica, I obtained in one case a cure in ten sittings; in another of fourteen days' standing amelioration after twelve massages, whereupon the patient left off and sought by means of baths to get further benefit: in a third case, which was of some six weeks' duration, I got no result whatever from fifteen sittings, and as the patient was tired of being continually knocked and beaten, he wished to be treated in some other way. In spite of the employment of almost every other means, and amongst these the continued current, the disease lasted four months before he was perfectly well. A case of supra-orbital neuralgia† was in eight massages very much improved.‡—*Boston Medical and Surgical Journal.*

*M. Martin of Lyons, cured M. Petit of a lumbago which prostrated him, by massage in five minutes. M. Martin has collected over a hundred cases of a similar kind. (Estradere du Massage, pages 108 and 142.)—G.

A Case of Opium Poisoning Recovered by Hypodermic Injections of Aqua Ammoniæ.

BY E. H. COOVER, M. D.

About three P. M., on Sunday, April 8th, 1877, I received a message to come immediately to see John H., aged thirty years. When I arrived I found him suffering with an abscess of the left parotid gland, and in a profound stupor. I at once suspected opium poisoning. Upon inquiry, I found that on the night before (April 7th) he had obtained three sulph. morphia powders from a drug store, one of which he took at ten that evening, which eased his pain somewhat during the night. On Sunday morning, at ten, he took another one, which gave him no relief until two P. M., when he suddenly collapsed. I found him at three P. M., in the following condition: Profoundly asleep: could not be aroused; pupils decidedly contracted; pulse feeble and irregular; respiration stertorous and feeble, so much so that he

†A gentleman, aged sixty, in ordinary good health, came to me with supra-orbital neuralgia, which had troubled him for a year in spite of sedatives, tonics, liniments and electricity. I gave him nine massages in three weeks. He was much improved, and the slight pain which remained disappeared without further treatment in a few weeks. I used no percussions in this case.—D. G.

For two cases of severe neuralgia of long duration, one of the ulnar nerve, and a case of coccyodynia of more than two years' standing, which were cured by massage, see the New York Medical Journal, July, 1875.

‡As practice in the manipulations, time, perseverence and personal interest in the matter are necessary, and these one cannot bestow who interests himself much in surgery or medicine, I have turned over to my old experienced surgical assistant, Dr. Dominico Barbieri, suitable cases for massage. He has already obtained a series of results, both favorable and surprising, far exceeding my expectation of this method of treatment. (Billroth, Weiner medicinische Wochenschrift, No. 45, 1875.)—G.

Dr. Von Mosengeil, of Bonn, at the close of a long article on massage, gives the following estimate of its availability: Its value must be recognized, though the best results will be obtained by the few who bring to its use abundance of time, patience, skill and strength. It is not adapted for every day use by every physician, nor will it be much used in hospitals from lack of time. Specialists, therefore, will probably get the most satisfactory results from it. (Archive f klin Chirurg., xix. 4, 1876.)—G.

breathed but four times a minute; skin about face, neck, chest, arms and hands, had a cyanotic appearance; finger nails dark; the capillary circulation had ceased; body bathed with cold prespiration.

TREATMENT.—From the condition and appearance of the patient I concluded that the antidotes generally recommended would not reach the case in time to save his life, so I determined to try a stimulant, and selected aqua ammoniæ for the trial. Gave three drops of the ammonia, hypodermically, diluted with three drops of water. I took my watch in one hand and the pulse in the other. I noticed the pulse and respiration as follows: In three minutes after this injection I thought I noticed a slight improvement in his respiration. I then gave another injection of three drops, undiluted. From the fourth to the fifth minute respiration more full, and increased to six per minute. Pulse increasing. From fifth to sixth minute respiration stronger, and increased to seven. Pulse improving. From sixth to seventh minute respiration increased to eight, and here I first noticed the return of the capillary circulation. Pulse improving. From the seventh to eighth minute respiration increased to nine, deep and full, and capillary circulation had returned; discoloration of skin disappeared. At this time I called him by name; he at once responded, and recognized those around him.

After he became conscious I ceased my observation. The patient remained drowsy for several hours afterward, but could be easily aroused. At 7 P. M. the effects of the morphia had entirely passed off. The remaining morphia powder I had weighed; it contained 1¼ grains; judging from this, the patient had taken 2½ grains. All this morphia had but little effect upon his system, until four hours after the last powder taken, when it suddenly exploded in the system, causing its poisonous effects.

The aqua ammoniæ produced considerable inflammation of the skin, but passed off in forty-eight hours, leaving nothing but an ecchymosis where it was injected.—*The St. Louis Electic Medical Journal.*

Treatment of Acute Dysentery by Injection of Hot Water.

BY JOHN J. REID. M. D.,

The plan of treating cases of acute dysentery by means of injections of water having a temperature of from 100 deg. to 110 deg. was suggested to the writer by the method pursued at the Woman's Hospital, in the care of cases of disease of the pelvic viscera.

The results obtained in dysentery have been such as to indicate its use in a large number of cases, if not in all, inasmuch as is does not interfere with any appropriate medication by the stomach.

It is inferred that the effects of hot water on the diseased mucous membrane of the rectum and colon are similar to what they are in the vagina, viz: blanching and contraction of the mucous membrane, with consequent diminution of the calibre of the canal.

Before having recourse to the above method, cold-water enemata were used, and with considerable benefit. Following this, tepid water was employed, and apparently, with more advantage. As may be supposed, however, neither of these agents produced the same direct action as water of a temperature varying from 100 deg. to 110 deg.

The method of administration is quite simple and does not require the services of a skilled nurse, or extensive apparatus.

The hips of the patient are slightly raised, by means of a pillow, and a basin of water of the requisite temperature is placed in the bed so as to allow the nates to rest on the edge of the vessel. The vaginal nozzle of a Davidson's syringe is then introduced into the rectum, and alongside of it the rectal or smaller nozzle. A current of water is then kept up for ten minutes, the water passing through the vaginal nozzle into the rectum, and returning by a steady steam through the smaller one into the basin, without causing any inconvenience to the patient. If the disease is extensive, and the colon involved for a considerable distance a long rectal pipe may be employed instead of the vaginal nozzle.

The immediate effect on the patient is one of comfort, which lasts for about an hour.

The injections are to be continued every two hours, till the active stage of the disease is part. *New York Elec. Med. and Surg. Journ.*

Phytolacca Decandra in the Treatment of Mastitis.

A. A. MOORE, M. D., of Camden, S. C. in the *Virginia Medical Monthly* for May, 1877, says:

In this section of country, as a general rule, only negroes are to be obtained as wet nurses. I dislike to employ them in this capacity for fear that they may be reeking with the fumes of some loathsome disease. Having also an innate and unconquerable aversion to all sorts of artificial feeding of infants, when there is any possibility of avoiding it, I hail with de-

light any remedy which promises relief from that painful trouble—mastitis.

In the January number (1878) of the *American Journal of Medical Sciences*, Dr. G. W. Biggers, of La Grand, Oregon, reports a few cases of threatened mammary abscess which he treated successfully with the fluid extract of poke root. Recently, I have had occasion to avail myself of the information he has thus afforded. Notwithstanding the process of hardening the nipples had been resorted to preparatory to nursing about ten days after confinement the lady's nipples became excoriated and fissured. For this, compound tincture of benzoin, nitrate of silver, etc., were tried in vain. A few days later a hard lump was discovered beneath the left nipple, accompanied with throbbing and shooting pains through the gland and down the left arm, and with oozing of pus through the nipple. Heeding this premonition of further trouble, and still hesitating to resort to the antigalactigogue properties of belladonna, for reasons already indicated, I immediately began the administration of fluid extract of phytolacca decandra. I gave gtt. xx every three hours in a wineglassful of water, until the lady had taken altogether nine doses, or about three fluid drachms. By this time, all symptoms of inflammation and abscess had entirely disappeared, and the only remaining source of discomfort was the sore nipples. By the aid of a large nipple shield fitted over a glass base, this trouble has also been overcome.

It is proper to mention, however, that before the patient had taken the last two doses she began to experience some of the neurotic effects of the drug, such as vertigo, dimness of vision, some nausea, etc. These symptoms, I think, admonish us either to entirely suspend its use, or to administer it at longer intervals.

I will also remark, that the phytolacca did not seem to have any deleterious action on the lacteal secretion, as the infants continued to nurse regularly, and without any ill effects whatever.—*Nash. Journ. of Med. and Surg.*

Diphtheria.

Dr. MEDBERY, M. D., (*Medical and Surgical Journal*), gives the following as his treatment of Diphtheria:—

When first called to a patient with this disease, I invariably prescribe some mild but active cathartic. Calcined magnesia I find is one of the best for this purpose. Locally, I use the persulphate of iron (Monsel's powder) and glycerine; one to two drachms of the former to one ounce of the latter, used with a swab every three or four hours, always using this wash soon after the removal of the membrane: Internally, I use chlorate of potassa, in large doses. A favorite prescription of mine is chlorate of potassa, three drachms; syrup of lemon and rose-water, each one ounce and a half; give one teaspoonful every two or three hours. This is for a child of three to five years. The amount is to be varied so as to meet each individual case. Externally, I use salt pork, rubbed well with capsicum. This constitutes my principal treatment in these cases. Should there be a tendency to a return of the membrane, I give a gargle, composed of tannic acid, ten grains, rose-water, two ounces; to be used every three or four hours.

I give this treament with much confidence, having used it through the past winter with results as before stated. Whereas, the treatment, as pursued by myself and many others (as per our text books), with hyposulphite soda, internally, and the liq., persulph. ferri, with carbolic acid and glycerine; hydrochloric acid, with iron, internally, each in their turn, have all signally failed of good, as the great mortality will show.—*Med. and Surg. Rep.*

Does Ergot Tend to Produce Abortion?

This important medico-legal point was discussed recently by the Obstetrical Society of Edinburgh. Dr. Keiller stated that it was generally supposed that it would produce abortion, but he thought this was doubtful. He referred to a case in which a medical man was accused of giving ergot in early pregnancy for the purpose of inducing abortion, premature labor having subsequently come on, causing the death of the female. He was asked to investigate the case, and to state his opinion as to the possibility of ergot to bring on labor. The defence was that sarsaparilla was given, and not ergot. Chemical analysis having failed to detect the difference between the two drugs, the case fell to the ground. On the whole, his experience taught that, in early pregnancy, ergot did not act with sufficient power on the uterus to produce abortion. In the latter months, when the muscular fibres were developed, and in labor, when the fibres were prepared, or were already contracting, he had no doubt of the power of ergot in stimulating contraction, and thereby greatly facilitating the emptying of the uterus and diminishing the tendency to post-partum hæmorrhage:

Dr. Matthews Duncan stated that he had not known ergot to produce abortion. He had not used it to prevent abortion, as in such circum-

stances he considered its use neither logical nor correct. If it had any action in abortion, it would be to favor it. He had used it in inducing premature labor without effect. As to its use in labor at full time, he had not found, nor did he believe, that it increased the pains, although it might in another way hasten the birth of the child. It was most useful in controlling hemorrhage; and in confirmation of the views he had expressed, he referred to the researches of Schatz with the toco-dynamometer. Although ergot did not increase the pains, it did tend to produce permanent or tonic contraction; and in this way might hasten the birth of the child, but in an injurious manner. It destroyed the intermissions between the pains, and thus produced what we wanted to avoid. The real value of the remedy was in the third stage of the labor, when it assisted in uterine contraction. In fibrous tumors he would not expect benefit from its use, except as a result of increased tonic uterine action. As to the analogy between the blood vessels and the uterus in regard to the action of ergot, he believed there was close resemblance.—*Nash. Journ. of Med. and Surg.*

Salicylic Acid as an Antiperiodic and Seminal Febrifuge.

J. P. Thomas, M. D., (*Medical and Surgical Journal*), says: The following is the usual formula to employ in all cases of remittent fever, and in recent cases of intermittents, as well as in the few cases of typhoid and typhus malarial fever in which I have used it and found it of decided benefit:—

℞ Salicylic Acid..... ʒ ii.
Spts. Ætheris Nit.....f ʒ vi. M.
Ft. Sol.

This sometimes leaves a slight excess of the acid undissolved, as twenty grains to the ounce is the largest amount soluble, any larger quantity being precipitated; and, if the nitre is not of full strength from fifteen to seventeen grains is all that can be held in solution.

Of this solution I direct one tablespoonful every two hours in recent intermittants, commencing twelve hours before a paroxysm; if nearer the period for the appearance of a paroxysm, every hour, or every half hour. It must be largely diluted with water before taken by the patients. For children under twelve years two teaspoonfuls; infants from one-half to one teaspoonful every hour."

He is of the opinion the Salicylic Acid administered in typhoid cases diminishes the chances of infection, modifies the violence and shortens the duration of the disease.

The majority of typho-malarial cases will yield more promptly to salicylic acid, with the assistance of other remedies, as indicated, to wit; turpentine in occasional alterative doses, with minute doses of calomel and soda, if required, than any other remedy I have yet tried.

In chronic cases of intermittents, after arresting the paroxysm with the use of the formula above presented, always administered in large and frequent doses, I order the following, in doses of one tablespoonful, three times a day; children two teaspoonfuls; infants one teaspoonful, at meals.

℞ Salicylic Acid..... ʒ ii.
Spts. Ætheris Nit ....f ʒ vj.
Acidi Carbolici.....gtts. xlviii.
Liq. Potassæ Arsenitis. ʒ iiss.
Tinct. Cinchonæ Comp. ℥ ii. M.

By dissolving the acid in the nitre first, and then adding the remainder.

To be continued for a month or longer, with the addition of ferroginous tonic when indicated.

A New Test for Bile-Pigment.

Dr. Walter G. Smith, of Dublin, believes tincture of iodine the best test for bile-pigment in the urine. It is easily procured, is not corrosive, the color produced is definite and persistent. and for delicacy it equals nitric acid. Dr. Smith's attention was called to the matter by a paper, "Sur l'Urine," in the *Journal de Pharmacie et de Chimie*, in 1869, by M. Maréchal.

The best method of procedure is "to place about a drachm of the urine in a test-tube, and then to allow one or two drops of tincture of iodine (B.P.) to trickle down the side of the tube, held nearly horizontally, so that the two fluids may touch, but not mix. If bile-pigment be present, a fine green color will almost immediately be developed below the red layer of iodine tincture." When the test-tube is held against a white surface three zones of color are distinctly seen—viz., the red iodine layer, the yellow stratum of urine, and the green color between the two. The test succeeds better by flotation than by mixing the fluids, and the green color will persist sometimes for days. If the urine is very dark in color it should be first diluted with water. Heat speedily changes the color from green to brown.—*The Doctor.*

Monthly Summary.

Treatment of Chorea.

Dr. Dickinson, in *The Lancet*, thinks purging does distinct good, and sometimes is the only medicinal process needed. He admits that most cases improve up to a certain point, sometimes to recovery, under the influence of rest and time. Several metals—antimony, arsenic, iron, and zinc—influence the disease, and he thinks antimony controls the jactitation of recent cases in the most immediate manner; but it must be given largely to be effective, and, therefore, it adds to the prostration, and may be the chief cause of a fatal result. Zinc is the next most efficient controller—a grain of the sulphate three times a day, a grain being added to each dose every day, until it amounts to from 14 to 26 grains. He once gave 45 grains three times a day, but a scruple or less usually suffices. It should be well diluted. The metal passes off by the bowels, and can be recovered from the fæces. He has never found any trace in the urine. If long continued it may give rise to anæmia, to prevent which iron may be given, and this may be continued when the zinc is gradually withdrawn. The valerianate is useful in less acute cases, associated with hysteria. Next to zinc comes iron, which should always be given in anæmic cases. The syrup of the bromide has given good results, and the valerianate may be tried. Zinc is best for florid children, iron for pallid; zinc in acute, iron in chronic cases. Arsenic is recommended in the lasting but slighter forms of chorea, where an occasional twitch or grimace or awkwardness in the limbs is the only sign. Strychnia is also recommended in such cases. So also are change of air, and all general tonics. Dr. D. has seen no benefit from belladonna, calabar bean, coninum, &c.—*Hospital Gazette.*

Simple Method of Testing the Purity of Chloroform.

Dr. Luecke, Strasburg, gives the following simple method of testing the purity of chloroform: Immerse a small piece of thin white blotting-paper into the chloroform, and then let it dry in the air. As soon as all the chloroform has evaporated, the paper will not present the least smell if the chloroform is pure. If there is any acid smell perceptible, it indicates the presence of butyric acid in the chloroform, and as a rule has the strong characteristic of that substance.—*The St. Louis Electic Medical Journal.*

Remedies for Sleeplessness.

In a recent exchange, Fothergill, after discussion of the cause of sleeplessness, tabulates as follows the remedies which have been hitherto most highly recommended for this complant:—

1. Opium is indicated when sleeplessness is caused by pain; when irritation of the vascular system is present, aconite and antimony are to be combined with it.

2. Hyoscyamus is of service when sleeplessness depends on disease of the kidney.

3. Chloral hydrate is inefficacious in sleeplessness dependent on pain, though it is a hypnotic *par excellence* in the sleeplessness of fever, particularly in children. This remedy is injurious in ill humor, brain exhaustion, and in the sleeplessness of melancholy.

4. Bromide of potassium acts as a sedative either on the brain cells or the vessels of the brain; it is indicated in those cases where peripheral irritations are present, and is very beneficial in the sleeplessness which is the result of maladies of the pelvic organs.

5. Alcohol is a powerful hypnotic in those cases in which sleeplessness comes from sorrow, ill humor, and mental disturbances.—*Nash. Journ. of Med. and Surg.*

Elephantiasis.

Dr. Casati has reported a case cured by ligature of the popliteal artery. Dr. Dohan has translated the report for the *Medical press and Circular* (May 16), and the following tabular statement is given of the results obtained by this treatment:—

	NAME OF OPERATOR.	PART AFFECTED.	ARTERY LIGATURED.	RESULT.
1	Harvey	Scrotum	Spermatic	Recovery
2	Carnochan	Leg	Femoral	Recovery
3	Erichsen	Leg	Femoral	Recovery
4	Ogier	Hand	Humoral	Recovery
5	Butcher	Leg	Femoral	Recovery
6	Kuarre	Leg & thigh	Iliac	Death
7	Fayer	Scrotum	Spermatic	Recovery
8	Simon	Leg & thigh	Iliac	Death
9	Souden	Hand	Humoral	Amelioration
10	Richard	Leg	Femoral	Amelioration
11	Fayer	Leg	Femoral	Recovery
12	Buch	Leg & thigh	Iliac	Death
13	Vanderson	Leg & thigh	External Iliac	Return after 13y
14	Jubiat	Leg	Femoral	Return after 2y
15	Bryant	Leg	Femoral	Amelioration
16	Alcock	Leg	Femoral	Death
17	Buchanon	Arm & hand	Axillary	Death
18	Simpson	Leg	Femoral	Recovery
19	Bourchand	Leg	Femoral	Amelioration
20	Hueter	Hand	Humeral	Recovery
21	Ranin	Leg	Femoral	Death
22	Fischer	Leg & thigh	Iliac external	No improvem't.
23	Lulruig	Leg	Femoral	Amelioration
24	Casati	Leg	Popliteal	Recovery

Mode of Action of Potassium Iodide.

Dr. Kämmerer explains the medicinal action of this salt by referring to its decomposition by the action of ozonized oxygen, and by carbonic acid gas. In solutions of potassium iodide, ozone causes separation of free iodine; and when in dilute aqueous solution, the pressure of carbonic acid gas breaks up the salt into hydrogen iodide (hydriodic acid) and potassium bicarbonate, but the free hydriodic acid is readily decomposed by free oxygen, even when not ozonized into iodine and water. Mon-iodide of potassium, when introduced into the stomach, is absorbed directly into the blood. Here it meets with a large quantity of carbonic acid gas at a high pressure, and is decomposed into hydriodic acid and potassium bicarbonate, and the former is then immediately split up by the oxygen in the blood into free iodine and water. And even if the decomposition of the iodide by the carbonic acid does not take place, the oxygen in the blood, which closely resembles ozone in its properties, is capable of setting the iodine free. This free iodine does not act upon the inorganic constitutents of the blood, since, on the others—between potassium phosphate and iodide—a reaction may take place, leading to the formation of an inferior oxide of iodine (subiodic acid), which last is reducible with extreme facility, and consequently effects rapid combustion of organic material, free iodine being at the same time set free, which again becomes converted into hydriodic acid to undergo the same series of changes. The action of iodide of potassium in augmenting the temperature of the blood and causing emaciation, Dr. Kämmerer considers to be fully explained by the action of the drug in increasing the combustive operations in in the blood.—*New Remedies.*

Treatment of Vesical Catarrh.

Dr. Edlefsen, recommends, in a late number of the *Deutsch. Archiv. j. Klin. Med.*, for catarrh of the bladder, oil of turpentine and balsam of copaiva. The turpentine should be given in doses of ten drops, four or five times a day. The alkaline urine will soon become acid. Should strangury or hæmaturia come on, or such other affection as nephritis, etc., the turpentine would be contraindicated, and Dr. E. then recommends chlorate of potash internally, in doses of twenty grains, every two or three hours. The subjective and objective symptoms rapidly abate under this mode of treatment. When the catarrh of the bladder is due to gonorrhœa, the author strongly recommends balsam of copaiva.—*Nash. Journ. of Med. and Surg.*

Ether Spray in Post-partum Hemorrhage.

Dr. W. Handsel Griffiths, in the *Practitioner*, for March, 1877, speaks thus on the important subject of post-partum hemorrhage: Although not an obstetric practitioner, I have recently been consulted in two cases of severe post partum hemorrhage. In both cases every means had been adopted, but unavailingly. It flashed across my mind in the first case to try the effect of the ether spray, and accordingly I directed a large spray over the abdominal walls, along the spine, and over the genitals; the uterus at once responded, and the cessation of the hemorrhage was almost immediate. In the second case I lost no time in adopting a similar treatment, and with an equally successful result. I have consulted several important obstetric practitioners in Dublin, and am informed by them that they are not aware that this treatment has been heretofore proposed. The advantages of the ether spray over the application of cold water, and the other means usually adopted in these cases must be patent to every practitioner of midwifery.—*Med. and Surg. Reporter.*

Cure for Prickly Heat.

A naval surgeon writes to the *Lancet*:—

I should like to bring before the section of the profession practising in tropical climates the following powder, as a cure for that troublesome skin disease, "prickly heat." I used to suffer myself dreadfully, and tried all the supposed remedies, without deriving any apparent good. Some, as carbolic acid, appeared to produce intolerable itching at night. Lately I have seen the local application of sulphate of copper recommended. The powder has the following percentage composition: sulphur sub., 60; magnesia oxidi, 15; zinci oxidi, 5. To be used morning and evening, in the following way: The dry powder being on a plate, a wet sponge is pressed down on it, and a certain quantity will adhere; this is firmly rubbed on the parts affected, fresh moisture and powder being from time to time supplied, the application being continued ten to fifteen minutes each sitting. The parts are then washed clean of the adhering particles. I have never seen the worst cases last beyond four or five days. So complete would the cure be that it would be impossible to say if the person ever had the disease. No smarting attends its use, and after the first application itching is practically at an end. Also in the form of prickly heat resembling urticaria it effects a perfect cure, and the powder used once or twice a week, as described, will keep the skin in a perfect condition.—*Med. and Surg. Reporter.*

Bulletin de Therapeutique.

MM. FELTZ AND RITLER: "Acute Poisoning by the Acetate of Copper." [The authors have arrived at the following conclusions:

1. The acetate of copper is more active than the sulphate.

2. The longer the animals have fasted, the more active are the symptoms of poisoning.

3. A poisonous dose of acetate of copper imparts so strong a taste to food, either solid or liquid, that it is impossible to swallow it unawares.

4. The appearance of icterus indicates that, in subacute poisoning by acetates of copper, there is a supersecretion of bile analogous to that produced by arsenic, antimony, phosphorus, etc.]

M. BOUCHARDAT: "Sulphate of Cinchonidine." [The author recommends that this alkaloid should be substituted for the sulphate of quinine both as a febrifuge in intermittent fever, and as a tonic in those diseases for which the latter is usually prescribed. Its action in his hands has been identical with that of quinine.]—*New Remedies.*

Does the Human Hair Grow after Death?

BY DR. CALDWELL, CROMWELL, IOWA.

Does the human hair grow after death? I answer in the affirmative, and this from my own observation of the matter. In November, 1862, I witnessed the resurrection of the body of Mr. R., of Muscatine county, Iowa, for the purpose of burial in the cemetery, two years after death. The Coffin had sprung open at the joints, through which the hair had crept, which attracted attention. On opening the coffin, it was found to measure 18 inches, the whiskers 8 inches, the hair on the breast 5 to 6 inches. He was shaved before being buried.

Also, in 1847, a similar circumstance occurred in Mercer county, Pa. In digging a grave they came upon the skeleton of a man that had been buried ten years. The hair was as firm as in health, and had grown to 11 or 12 inches. *The St. Louis Electic Medical Journal.*

Salicylic Acid and Borax.

A correspondent of the *Pharmaceutical Journal* says that while a solution containing ten grains of salicylic acid and ten grains of borax in one ounce of water, has a very bitter taste and an acid reaction; a solution containing ten grains of salicylic acid and fifteen grains of borax has no disagreeable taste, and is nearly neutral. This solution appears to possess all the valuable properties of salicylic acid, and forms an agreeable means of using the acid internally or as a gargle.—*The Doctor.*

Complete Rupture of Urethra; Retention of Urine.

A case of considerable interest has recently been under treatment in the hospital, and shows what result may ensue from injury to the perinæum. A patient, aged twenty-two, while working on a canal-boat, fell astride a board, and received a severe contusion in the perineal region. Shortly after the injury the patient urinated without difficulty, but found that the urine contained blood; afterward he was unable to pass his water, and remained for about two days without treatment. When he was taken to hospital the bladder was found destended with urine, and reached up nearly as far as the umbilicus; there was also extravasation of urine in the scrotum and perinæum. All attempts to introduce a catheter were without avail, and the urine had to be evacuated by means of an aspirator.

For the relief of the extravasation of urine an incision was made in the perinæum, beginning at the junction of the penis and scrotum, and extending backward to within an inch of the anus. A sound was introduced into the urethra, and the incision carried down to it. The urethra was found to be completely torn across. Following the operation, profuse bleeding took place, which was controlled by means of pressure made by a Barnes dilator filled with cold water.

The patient did very well afterward, with the exception of losing by a single slough the whole of the sides of the wound. At the present time a mediumsized sound can be carried into the bladder.—*New York Elec. Med. and Surg. Journ.*

Oxide of Zinc in Obstinate Diarrhœa.

Dr. Bonamy, of Nantes, relates, in the *Bull. de Therap.*, some cases confirmatory of the great and speedy utility of oxide of zinc in obstinate diarrhœa that has resisted various other remedies. He employs the formula recommended by Prof. Gubler, who first used the remedy for this purpose, viz., three grammes and a half (fifty-three grains) of the oxide, combined with half a gramme (eight grains) of bicarbonate of soda, and divided into three or four doses, one to be taken every three hours. The addition of the soda prevents the production of vomiting by the zinc.—*Med. and Surg. Reporter.*

Ascarides Vermiculares.

℞ Tinct. ferri chloridi. ..... ℥ ss,
Aquæ calcis ..... Oj.

Ft. injectio. Use one-half at night and the other half in the morning.

Antihydropin.

In Russia, the common cockroach (*Blatta orientalis*) is a favorite popular remedy for dropsy. Dr. P. Bogomolow, of St. Petersburg, has lately (*Petersburg Med. Wochenschrift*, No. 31, 1876) examined its effects in nine cases of Bright's disease, heart disease, and other affections accompanied with severe dropsy, and in all the result was the same. There was an increase in the secretion of the urine and prespiration, with rapid disappearance of œdema, and also almost complete disappearanee from the urine of albumen and renal derivatives.

The dose was five to ten grains of the powdered cockroaches in the twenty-four hours, but they were also administered as a tincture and as an infusion. These insects do not, like cantharides, produce any irritant action on the kidneys. Dr. Bogomolow has succeeded in extracting from them a crystalline body which he calls antihydropin, and which is their active principle.—*Drug. Cir. and Chem. Gaz.*

Influence of Artificial Suppression of the Cutaneous Secretion.

Sokoloff (*Virchow's Archiv.*) experimented upon some forty-six dogs and rabbits. These animals were painted with oil and other substances, the results being as follows: The temperature usually fell. The urine showed gray and hyaline cylinders, kidney-epithelium, and young cells by which its specific gravity was increased; albumen also appeared. In one case, dropsy occurred. Diarrhœa, loss of power in the heart, cramps, sopor, and, when the coating was extensive or complete, death, in periods varying from a few hours to several days. Post-mortem examination showed congestion of the brain and membranes, as well as of most of the internal organs.—*The Drug. Cir. and Chem. Gaz.*

Stimulants Used by the Race.

It is estimated that coffee, both beans and leaves, is drunk by sixty millions of the human family. Tea of all kinds is used by five hundred millions, and opium by four hundred millions; alcohol, in its various forms, by five hundred millions of the human race. Tobacco is probably used by seven or eight hundred millions. These startling facts indicate a large proportion of the race using some substances that are either stimulants or narcotics. The work of the physiologist, in the future, will be to determine the true place in nature of these substances, and indicate where their use ends and abuse begins.—*Pacific Med. and Surg. Journ.*

Administering Iodine Through a Nurse.

Dr. Gemmel, of Birnbaum, relates the case of a feeble, rickety child a year and eight months old, to whom it was thought of great importance that iodine should be administered, when, however, in any form tried, had induced vomiting and irregular action of the bowels. It was then resolved to try giving it through the milk of a nurse, and in a few days after she had begun taking it, her milk was sufficiently impregnated with it. It was found also that a cow's milk could be similarly affected by giving the animals ten grammes of iodide of potassium per diem for a fortnight. The child, under the use of the nurse's milk, bore the iodine very well, and soon recovered.—*Drug. Cir. and Chem. Gaz.*

Salicylic Acid Bad for Teeth.

M. Blandeau, of Paris, states that according to dentists, this agent has injurious effects on the teeth. English observers have noticed its effect on the bones, and necrosis of the tibia has been assigned to its use. It evidently possesses considerable affinity for the calcareous salts of bone, and we see the urine loaded with lime salts in an ultra-physiological proportion, from the internal use of the acid. The salicylate of soda presents the same danger; and too much caution cannot be taken in the use of any salicylic preparation.—*Drug. Cir. and Chem. Gaz.*

Trephining for Epilepsy.

Prof. Agnew lately trephined a young man aged 20, who had received a kick from a horse eleven years previously, leaving a depression of the skull. (*Phil. Med Times.* May 12, 1877.) Epileptic convulsions followed, three years afterwards, and increased in frequency up to fifteen or twenty in a day. The depressed bone was removed, and the patient did well till an accumulation of pus under the wound caused convulsions. A drainage tube was inserted and no further trouble occurred. The wound healed perfectly in a short time.—*Pacific Med. and Surg. Journ.*

Venereal Warts.

The most effectual treatment of these is to snip them off with scissors, and to touch the bleeding bases with the red-hot wire. This stops the hæmorrhage, and effectually prevents the return of the original trouble.—*Virginia Medical Monthly.*

Treatment of the Gingivitis of Puerperal Women.

Drs. A. and D. Pinard (*Bulletin Général de Thérapeutique*, 1877, p. 157) call attention to this complication of pregnancy, which they assert to be of more frequent occurrence than is generally admitted. The appearances presented in mild cases are as follows. The gums in the neighborhood of the two maxillæ are redder and more congested than in the normal condition; they are tumefied, the interdental free border is exaggerated as to its normal festooned appearance, and covers, in part, each tooth. This condition is more marked about the convex portion of the maxillæ than in the neighborhood of the molars. The least pressure on the tumefied portions provokes hemorrhage. At a stage one degree further advanced, the teeth lose their solidity, can be moved laterally, and sometimes seem to yield to perpendicular pressure; sometimes they are pushed out of their sockets. Mastication under these conditions is, of course, more or less painful, and loss of blood occurs to a greater or less degree. Pain is rarely severe.

The remote cause of this affection is, of course pregnancy; what the proximate cause may be, however, has not yet been demonstrated with certainty. It usually appears towards the fourth month of pregnancy, some times, but rarely, sooner, going away again a month or two subsequent to delivery, especially in women who do not suckle their infants. As to treatment, the authors have used solution of iodine, of glycerole of tannin, and chlorate of potassium, which though producing good effects are far from bringing about a rapid cure.

Chromic acid is good in certain cases, but must be employed with great circumspection.

The following solution of chloral has given good results:

℞.—Chloral hydrat.,
Tinct. cochleariæ,.....*aa* q.s. M.

Of course the teeth must be thoroughly cleansed of tartar, etc., before this application is made.—*Dental Cosmos.*

Bromhydric Acid as a Vehicle for Quinine.

Bromhydric Acid, which is being so highly commended as a vehicle for the administration of quinine, by which the disagreeable ringing in the ears caused by the latter is avoided, is prepared as follows:

℞ Potassii bromidi, grammes 8 [gr. cxx.]
Acid. tartarici cryst. do 10 [gr. cliij.]
Aquæ..... do 30 [f ℥ j.]

M. Agitate thoroughly; allow it to precipitate in a cool place and decant. Usual dose, half a drachm or more.—*Ohio Med. Journal.*

Nitrate of Silver in Pruritus of the Vulva.

Dr. Charles (*Annales de Gynecologie*) speaks most highly of the application of the solid nitrate of silver in the treatment of vulval pruritis. The seat of the itching is oftenest near the clitoris, or in the nymphæ; sometimes at the margin of the anus. It is necessary to cauterize freely, passing the crayon two or three times over the affected surfaces, and even somewhat beyond them. Dr. Charles states that he has found, without a single exception, great relief from the first cauterization; often a complete cure. Sometimes it is necessary to recur to the cauterization a second or third time after some days.—*The American Practitioner.*

Treatment of Chronic Chills, and Enlarged and Indurated Liver and Spleen.

Dr. Q. C. Smith, of Cloverdale, Cal., writes to the *New Orleans Medical and Surgical Journal*, May, 1877, that during his residence in the lower Mississippi River Valley, he found iodide of potassium, in fifteen to thirty grain doses three times daily to be the most efficient remedy for the conditions mentioned. He gave it continuously for several weeks, and in obstinate cases for two or three months; but he allowed intermissions of four or six days at the end of every two weeks. For keeping the bowels soluble,

℞ Extract. belladonnæ,
Extract. nucis vomic..... aa gr. j.
Pulv. ipecac..... gr. ij.
Aloes, (socotrin)..... gr. xvi.

Misce. Make 8 pills. S: One pill, one to three times daily.

In addition, painting (as often as the skin would allow) over the regions of the spleen and liver, with a strong ethereal camphorated tincture of iodine was often followed by good results.

Dr. Smith found the extract of cinchona much better than quinine for the relief of malarious diseases. He used the form called amorphous quinine in pills, and combined muriate of ammonia and solu. extract buchu with it. A very common recipe was

℞ Potas. iodid.,
Pulv. cinchon..... aa ℥ i.
Spts. frumenti.....Oi. Misce.

S. Tablespoonful three times daily just after meals.

This amount generally prevented a recurrence of "chils" for the season, and the patient grew strong and hearty, with clear skin, and would remain all right till the following autumn at least.—*Virginia Medical Monthly.*

Scrofulous Ulcers—Red lead and Cinnabar Plaster.

In his wards at the hospital of Saint Louis, M. Vidal has for several years made use of a plaster which he considers very efficacious in cleansing the greater number of ulcers and scrofulous sores. Its composition is as follows:

Diachylon plaster	26 parts.
Red lead	2.50 "
Cinnabar	1.50 "

These ingredients are thoroughly mixed and spread upon a piece of calico like an ordinary diachylon plaster; small pieces of the plaster are used, a little larger than is sufficient to cover the ulcer. It is a very appropriate mode of treatment, and may be easily employed for a long time. M. Vidal recommends it strongly. —*London Med. Record.*

Elixir of Eucalyptus.

(E. M. B., Dayton, Ohio.)—This may be prepared as follows:

Eucalpytus leaves	4 troy oz.
Alcohol, 85 per cent	q. s.
Oil Orange	℥ ij.
Oil Cinnamon (Ceylon)	℥ ss.
Sugar	¾ lb.

Reduce the eucalyptus leaves to a coarse powder, add the oils to 1½ pints of alcohol, moisten the leaves with a portion of this menstruum, and pack it in a percolating funnel. Pour on the remainder of the alcohol and percolate 1½ pints of tincture, using if necessary an additional quantity of 85 per cent. alcohol. Add the sugar to the mixture and make the product measure 2 pints by adding more alcohol. If alcohol should be objected to, a distilled water may be prepared from eucalyptus leaves, which may be flavored and sweetened as above. *New Remedies.*

Chronic Chills.

I send you a prescription—an infallible one in my hands—for chronic chills, and am sure that no one will be disappointed who will give it a trial:

℞ Ferri arsenitis.....2 grains.
Quinise sulph.....32 grains.
Ext. taraxaci..... q. s.
M. Ft. mas. et div. in pil 32.
S. One three times a day, after meals.

The patient should be advised in regard to the arsenic; and when its affects are seen, the dose should be reduced to two a day, or even to one.—*New York Eclec. Med. and Surg. Journ.*

V. St. Clair McNider, M. D.
Jackson, N. C.

Diphtheria.

L. D. Morse, M. D., (*Medical and Surgical Journal*), places much reliance on the following in the treatment of Diphtheria:

℞ Tinct. ferri Mur.....℥ ii.
Potassæ chloratis pulv.....℥ j.
Glycerinæ pur.....℥ iii.
Liquor calcis.....℥ vii. M.

A teaspoonful to a tablespoonful, according to age, every hour for twenty-four to forty-eight hours, giving the dose less frequently as the symptoms improve.

Solution of Bromhydrate of Conia, for Hypodermic use.

Bromhydrate of conia, cryst	0. 50 gm.
Alcohol, 90%	1. 50 "
Cherry-laurel water	23. 00 "

1 gramme contains 2 centigrammes (0.02 gm.) of the salt; or 1 drop contains about 1 milligramme (0.001 gm.)—*New Remedies.*

Treatment of Cholera Infantum. (King.)

Leptandrin	6 grs.
Quinia sulphate	3 "
Camphor	1½ "
Ipecac	¾ "

Mix and divide into 12 powders, of which one may be given every two or three hours, to be continued, if necessary, for several days.—*New Remedies.*

An Excellent and Elegant Formula for Prescribing Gallic Acid.

℞ Acidi gallici.....℥ j.
Glycerinæ.....℥ j.
Aquæ bullientis.....℥ v. M.
Sig.—A tablespoonful *pro re nata.*

In Bronchitis of Typhoid and other Adynamic Fevers.

℞ Olei terebinthinæ.....mx–xx,
Ether sulphurici.....mxx–xxx,
Spts. juniperi comp....mxxx,
Misturæ acaciæ.....℥ jss. M.

Ft. haustus. To be taken every two or three hours.

Gleet and Chronic Gonorrhea.

As an injection in gleet and gonorrhœa use the following:

℞—Hydrastis Canadensis,.....℥ ij.
Decoct. Tinct. Opii,.....℥ i.
Aquæ Mucilag. Acaciæ,....aa. ℥ ij.—M.
St Louis Eclec. Med. Journ.

Neutral Sulphate of Eserine.

A given quantity of eserine (or physostigmin) is directly and *exactly* saturated with sulphuric acid diluted with nine parts of water. Or an ethereal solution of eserine is shaken with a measured quantity of dilute sulphuric acid of known strength, sufficient for *exact* neutralization. Either solution is immediately evaporated to dryness at a gentle heat. It is usually obtained amorphous, although it may, with great difficulty, be obtained crystalline. It is very deliquescent and must be preserved in a well-closed vial. The dose of the salt is 0.001 gm. (about 1-64 grain) internally. For producing contraction of the pupil (myosis) 0.02–0.05 gm. ($\frac{1}{3}$—$\frac{3}{4}$ grains) are dissolved in 10 gm. (162 min.) of water.—*New Remedies.*

Bromide of Iron (Ferrous Bromide).

Iron filings.....40 gm.
Distilled water.....216 gm.
Bromine.....80 gm.

To the water, contained in a flask, is added first the bromine, and gradually the iron. Towards the end a gentle heat is applied, until the liquid assumes a fine green color. The whole solution, including the uncombined iron, is immediately transferred to a glass-stoppered bottle. As it does not keep long, it is best to at once make it into syrup or into pills. It contains $\frac{1}{5}$ of its weight of bromide of iron. One gramme of pure ferrous bromide is precipitated entirely by 1.56 gm. of silver nitrate. —*Ibid.*

Syrup of Bromide of Iron.

Normal Solution of Bromide of Iron 15 gm.
Syrup..... 985 gm.

Mix. 20 gm. of this syrup, or one tablespoonful, contain 0.10 gm. (1.6 grains) of bromide of iron.—*Ibid.*

Dialysed Iron.

Solution of ferric chloride (sesquichloride), spec. gr. 1. 261.....100 gm.
Water of ammonia, spec. gr. 0.923 35 gm.

Add the latter very gradually to the former. The precipitate formed is redissolved at first very rapidly, then more slowly, but finally it is again entirely dissolved, and the solution is now transferred to a dialyser, the water surrounding which must be frequently renewed. After a while, the highly colored ferruginous solution ceases to precipitate silver nitrate, or to have an acid reaction. It has also lost the characteristic taste of iron. 10 c.c. of the product are evaporated to dryness to ascertain the percentage of ferric oxide, and the remaining solution is diluted with water until the final product contains 10% of ferric oxide.—*Ibid.*

Syrup of Chloral Hydrate.

Dissolve 50 grams of crystallized chloral hydrate in 950 grams of orange-flower syrup. A tablespoonful (20 grams) contains 1 gram of chloral hydrate.—*American Journal of Pharmacy.*

Tincture of Quillaia.

100 grams of quillaia bark are digested in 500 grams of alcohol in a suitable apparatus, placed in a water-bath, the temperature being maintained near the boiling point for half an hour; the whole is then macerated for 48 hours with occasional agitation and afterwards filtered. The tincture is mainly employed in preparing emulsions of substances insoluble in water, such as *copaiba*, *tar*, *oil of cade*, which are made according to the formula for Emulsion of Tolu Balsam.

Dissolve 2 grams of balsam of tolu in 10 grams of 90 per cent. alcohol, add 10 grams of tincture of quillaia and mix with 78 grams of hot water.—*Ibid.*

Tincture of Physostigma.

Macerate 100 parts of powdered Calabar bean in 500 parts of 80 per cent. alcohol for 10 days; express and filter.—*Ibid.*

Glycerite of Extract of Physostigma.

Is made in three different proportions. The alcoholic extract of Calabar bean is well mixed with 10, 20 or 100 times its weight of glycerin and dissolved by the aid of a moderate heat. It should be completely dissolved.—*Ibid.*

Tar Water.

The wood tar should be of a red-brown color, transparent and free from resinous deposits. Mix 5 grams of such tar intimately with 10 grams of pine-wood sawdust, and macerate for 24 hours with 1,000 grams of distilled or rain water, stirring frequently.—*Ibid.*

Effervescing Carbonate of Lithium.

Take of citric acid 40 grams, bicarbonate of sodium 50 grams, and carbonate of lithium 10 grams. Powder and mix well, then introduce into a wide flat-bottomed dish, and heat to about 100°C. (212°F.), stirring constantly until the powder becomes granular. Separate the granules of uniform size by means of appropriate sieves, and preserve them in well-stopped bottles.—*Ibid.*

EDITORIAL.

The New Materia Medica and Therapeutics.

BY I. J. M. GOSS, A. M. M. D., PROFESSOR OF THE PRACTICE OF MEDICINE IN THE COLLEGE OF AMERICAN MEDICINE AND SURGERY, MACON, GA.

We take pleasure in calling the attention of the profession to this valuable addition to medical literature just issued from the press. Although modestly styled by the author "a little Compend," examination will show it to be an admirable epitome of the vast and interesting department of the science of medicine of which it treats, and we connot do better than quote the opening words of the preface—"It presents the leading truths of the science in a concise form and gives also the experience of the author with that of many of the best therapeutists of the world. Designed, as it is, as a text book for students, yet it will serve to refresh the memory of the physician. The leading facts and principles usually embraced in larger works on the subject, and those usually taught in medical schools are treated in a concise form unencumbered with needless hypothetical speculation"—This tersely explains the scope and purpose of the work which in its execution bears the mark of careful thought, study and analysis. The system of classification adopted is according to the therapeutical properties of the remedies discussed, the groupings being arranged in alphabetical order, e. g.—Arterial sedatives, embracing Aconite, Digitalis, Gelseminum, Lobelia, Veratrum, &c. General sedatives, Conium, Bromide Potassium, and other Bromides, Cypripedium, Hydrocyanic Acid, Zinc Phosphide; the Anti-Phthisics is which are included the Hypo-Phosphites, Cod Liver Oil and Firwein. The Diaphoretics, Diuretics, Emmenagogues, Narcotics, among which he classes Camphor, Stimulants, Tonics, &c, are all discussed, each under its appropriate heading, and much space is given to the new articles of the foreign and indigenous Materia Medica which have recently been introduced to the notice of the profession by the medical periodicals of the day. Although of necessity in great part a compilation, the book bears evidence of original thought and individual experience, the fruit of many years' active practice by the author. The style is clear, perspicuous, and characterized by an easy grace and elegance of diction which commend it to the layman, who "reads up" in medicine solely as a relaxation.

The typographical execution of the book is faultless, and reflects great credit upon the publisher, Geo. H. Field, M. D., St. Louis, Mo., to whom we would refer all members of the profession, who may desire to add to their libraries this valuable and when once used, indispensable Compendium of the Materia Medica and Therapeutics.

Quinine Speculation.

For the Journal of Materia Medica.

The enormous advance in Quinine makes it incumbent upon every physician to investigate and study the use of other articles of the Materia Medica. During the war, Southern physicians were compelled to use substitutes for Quinine, and were reasonably successful; and to the extent that the physicians of the United States will apply themselves to this, seeking remedies that will be as efficacious, in a majority of cases, will they render the entire Profession and Country service. Let them make up combinations and use the smallest possible quantity, cut down the consumption one half, and the speculation will prove a failure.

The speculation, practically, comes out of the Doctor, and not out of those who *buy and sell, and make profits*, but out of those, in part, who are sick, often illy able to bear the cost. Next, and largely from the Doctor, who has to supply to his patients, and in most cases getting little or nothing for medicine furnished. This is particularly the case with country practitioners, the exceptions being in the larger places, where prescriptions are sent to Druggists. Therefore, in fact, more than one half of this *penalty* is paid by the doctor, and it behooves him to see why his slender income is impaired. He has two remedies, one, as I have stated, to reduce the consumption, and the other is, to see that Congress takes off the duty, which helps to sustain this speculation. If Congress intimates a disposition to do this, the speculators will unload their stock as they did during the whiskey speculation. Every physician should see the member of Congress from his district, and make him responsible to his constituents that the tariff is taken off promptly. If the medical journals will unite with the Profession of this country in this object they will wipe out a disgrace to the statute book and to philanthropy.

It is useless to say it cannot be done, it can be, by a united effort on the part of those most interested.

Adulteration and cheating in this article will follow as in the whisky speculation, if prices remain as high as at present. You will hear from me again. W.

Louisville, Ky., July 2d, 1877.

MESSRS. TILDEN & Co.:

I have from time to time been induced to purchase the U. S. P. Cathartic Pills by the pound, because they were cheap, and were warranted full strength. I have been so cheated I have resolved to buy no more in that way, but yours in large bottles; they have never disappointed me. You published an article on this some time ago, will you republish it and oblige. I. S. W.

We published last month a "Caution to Buyers" of this class of pills because they were cheap.

The article referred to was the Commercial Formulas as published for Commercial Colocynth Comp, which enters so largely into the U. S. P. Pill.

We will in another number give other points on this subject.

Compound Cathartic Pills. (U. S. P.)

The formula for this Pill, according to the U. S. Pharmacopœia, is as follows:

Extract Colocynth Comp'd	1-2	ounce.
" Jalap	3	drams.
Calomel	3	"
Gamboge in powder	2	scruples.

Divide into 180 pills.

This pill is used more than any other in general practice as a cathartic.

Dr. Wood says, "It is highly important for the efficiency of these pills, that they be prepared in exact compliance with the directions of the Pharmacopœia, and that the *Extract of Colocynth Compound and Extract of Jalap* used, be of good quality. When they fail, the result is generally owing to the substitution of Jalap for the Extract, or to the use of an Extract of Colocynth Compound, made of nearly inert Scammony, inferior Aloes, insufficient Colocynth, and altogether badly prepared." That our readers may fully understand what is meant by inert Scammony, we give the formulæ for making factitious, or Commercial Scammony;

1. Aleppo Scammony	1	ounce.
Powdered Jalap	7	"
" Senna	2	"
" Charcoal	2	ounces.
Manna	6	"
Gamboge	4	"
Ginger	1-4	"
Syrup of Buckthorn	q. s.	
2. Powdered Jalap	2	ounces.
Senna	1-3	ounce.
Aleppo Scammony	1-2	"
Gamboge	1-2	"
Charcoal	1-4	"
Ginger	1-4	"
3. Aleppo Scammony	1	ounce.
Ext. Jalap	5	ounces.
Gum Guaiac	10	"
Sago	10	"
Ivory Black	4	"

These formulæ explain clearly the cause of inert Compound Ext. Colocynth, and how *cheap* Compound Ext. Colocynth can be made. Were prime articles used in the above, even, the preparations would be superior to much of the Scammony sold in market. It is clear that pure Scammony, as well as other pure articles, must be used to make the pill reliable.

CORRESPONDENCE.

Philadelphia, July 6th, 1877.

EDITORS JOURNAL OF MATERIA MEDICA:

It has been some time since I last communicated with you. I write to you now to assure you that I still receive your very highly appreciated periodical.

It occupies a place among the papers medical which come to my table, which none other with which I am acquainted can fill. I am very much pleased with its new form, and am happy to say that I can take still more pleasure in recommending it to my medical friends.

I must here acknowledge my dependence upon many of your preparations in the treatment of disease.

The Bromo-Chloralum I learned to value very highly, during the epidemic of Small Pox which raged in the northern section of this city, in the winter of 1871-2. As an anti septic medicine, deodorizer, and disinfectant, I think it has no equal in anything I have ever tried. As a local application to foul ulcers, particularly ulcerated sore throat, it has proved in my hands, exceedingly servicable. I have used it both in strong and weak dilutions with water, and it answers well in either. I think, that in very foul ulcers, the stronger or stimulating qualities of the "Bromo," are required. I have found it effectual in *sumac* poisoning; others did with erysipelas, diluted one-half with water. I have successfully treated œdema of the *glans penis* and prepuce, with phymosis, occurring along with *gonorrhœa*, with the same dilution. It seems to me, that the people of this city are very much behind the times, as regards disinfectants and deodorizers, or they would not still resort to the unpleasant use of the Chlorides of Lime and Sodium, Carbolic acid, etc., things which create a more disagreeable smell, than the one desired to be gotten rid of.

Two ounces of Bromo-Chloralum diluted, and sprinkled through a large cellar, will deodorize it in two or three minutes, yes, almost in as many seconds and without leaving any odor; and it will also disinfect it of any poisonous or noxious elements, thereby preventing disease, and rendering pleasant the odor of the contained atmosphere. In point of cheapness therefore, it is a matter also of great consideration as well as of superior usefulness.

The Elixir Iodo-Bromide of Calcium Comp., is a favorite with me as an alterative or blood medicine or restorative, in diseases of a scrofulous character, as many affections of the skin, particularly those of pustular order, also in disorders of the lymphatic glandular system. In the language of a prominent pharmaceutist and friend of the writer, "*it is preëminently an alterative.*" I will relate here, a little circumstance which happened with me a year or so ago, in connection with a couple of our city druggists, the one just mentioned

being one of the two. It was this: a patient called upon your correspondent for what he considered required "a good alterative" and being somewhat acquainted with the different medicines prescribed as such, by physicians, he began questioning me, about the reliability of various articles of the kind. After trying to satisfy his somewhat skeptical nature, I prescribed your Elixir Iodo-Bromide Calcium Comp., and told him that I felt sure it would do him good. The next thing was, where could it be obtained, it being a somewhat new thing in this city. He was told to go to my supposed friend, Mr. So and so near by, a gentleman who had compounded many hundreds of our prescriptions in the past few years. He went as directed, the next day or two, happening to meet him on the street, and upon asking him how he was and so forth, he replied he did not get your prescription filled, the druggist said he did not keep it or any other of Tilden's preparations, that "I was trying experiments with him in using that medicine."

I assured him that it was not an experiment with me that I had often prescribed it before, and understood what I was about, and asked him to go to Mr. K's store a few squares below, and he would obtain it.

He went and just as he was asking for the medicine by handing the prescription, I happened to enter the store and heard my patient ask what that medicine was good for; he was answered "it is an alterative." "*Is it an alterative?* questioned the patient, "*It is preeminently* an alerative" was the druggist's reply; the known veracity of that gentleman, soon dispelled all fears he had been taught to entertain, of being experimented with by his prescriber, and he quickly said "all right let's have it." This goes to show how some people will not hesitate to injure others, merely because of their ignorance of, or inability or indisposition to keep in their store, what is called for.

However the patient still lives and is in the faith of the "Iodo", and the ones that recommended it to him; and the suicidal druggist, lives to mourn the loss of more than one customer, in consequence of his exquisite charity.

Resp'y, W. C. Buckley, M. D

1834 N. 8th St. Removed from 1550 N. 11th St.

Hugh Hollis, M. D., Jack's Creek, Henderson Co., Tenn., Jan. 13, 1877.

"To continue my subscription to your valuable and ever-welcome Journal, I enclose to you One Dollar to pay to May, 1878. I feel I can't get along without it, and am highly pleased with the improvement of double columns."

H. M. Smith, M. D., Vincennes, Ind.

"The Journal is a *vade mecum* of valuable medical news to the active practitioner, which one would not like to be without."

Firwein.

John Avery, M. D., Starksboro', Vt., May 16, 1877.

"I have employed the Firwein and Elix. Iodo, and they have given full satisfaction in the cases in which I have used them."

W. D. Swain, M. D., Copake, Col. Co., N. Y., June 30, 1877.

"The use of Firwein in marked cases of Chronic Bronchitis, leads me to regard it as nearer a specific in that affection, than any other remedy heretofore placed in the hands of the profession."

Messrs. Cole & Bro., Pella, Iowa, June 26, 1877.

"We find your Firwein a most excellent article in all cases of Throat and Lung complaint. We ordered 6 lbs. for a friend a few weeks ago. He has used it with the best results, and has given small quantities to friends who speak highly of it."

T. J. Hill, M. D., Sardis, Harrison Co., W. Va., June 22, 1877.

"I wish to say a word in behalf of your preparation "Firwein", I have used it very extensively in my practice since I knew there was such a preparation, and always with the most satisfactory results."

Diphtherine.

Dr. Calhoun.—I have used your Diphtherine in several cases with success, and believe in an epidemic it will be invaluable indeed; with that and the Bromo I don't see as a physician need fear it.

Dr. Stewart.—I have been using your Diphtherine in a case of Ulcerated Sore Mouth, the sequence of Syphillis, and my patient is nearly cured.

Dr. Brown.—No case of diphtheria has occurred in my practice since I procured the Diphtherine, but I have used it in Sore Mouth, from various causes, as well as had my patients swallow some with excellent effect.

Chronic Articular Rheumatism.

By an Erratum in our last issue (June No.) page 114, Zollikoffer's formula was incorrectly given—It should be:

℞ Pulv. Resin Guaiac.....
Potass. Iod..... *aa* gr. x.
Tinct. Colch. Sem..... ʒss.
Aquæ Cinnamon..... ...
Syr. Simp.....*aa* ℥i. M.

Sig. Teaspoonful to a tablespoonful, three times daily.

THE
JOURNAL OF MATERIA MEDICA,
A Monthly Journal Devoted to
MATERIA MEDICA, PHARMACY, CHEMISTRY, AND NEW REMEDIES.

New Series.] AUGUST 15th, 1877. [Vol. XVI.—No. 8.

Jaborandi.

Alexander Hutchins, A. M., M. D., president of the Medical Society of the County of Kings, read before the Medical Society of the State of New York, June 20, 1877, a paper on Jaborandi, from which the following extracts are made:

Jaborandi is to be estimated not as a specific against certain diseases, but as contributing to the relief of a symptom common to many diseases; and by provoking the rapid and energetic action of a certain class of structures, to relieve indirectly certain morbid states.

The palpable effect of a full dose of jaborandi is a speedy, profuse, and continuous perspiration, accompanied by a similarly speedy, profuse, and continuous salivation.

A drug that will, without great primary elevation of temperature (such as occurs when artificial perspiration is produced by restricting the loss of heat,) set up these actions in from twenty to ninety minutes, continue them from two to five hours, producing from three hundred to five hundred cubic centimeters (nine to fifteen ounces) of perspiration, and from one hundred to eleven hundred cubic centimeters (three to thirty-three ounces) of saliva, with very slight disturbance of the general system and with no unpleasant after-effects, is deserving of notice, particularly when it is remembered that no other known drug produces the same or analogous effects. And this notice it has received; for since its introduction into Paris, by Dr. Coutinho, in the summer of 1873, jaborandi has received an amount of detailed experimental and journalistic attention altogether unparalleled in the history of any one drug in the same space of time.

The usual sequence of a full dose of jaborandi is a very simple one: In a few minutes a slight warmth is felt over the entire body, the face is slightly flushed, a copious secretion of saliva is poured out, and a free perspiration breaks over the entire body. During this period of from two to five hours there is a slight occasional lowering of the temperature from five tenths to one and five tenths degrees, and an acceleration of from ten to thirty pulse-beats. Toward the subsidence of these effects the patients almost invariably fall into a quiet sleep, awaking refreshed and inclined to eat.

There are occasional modifications of this quiet history (and, judging from my own experience, the variations are markedly exceptional), such as hiccough, nausea, vomiting, diarrhea, and the disturbance of vision; but these seem to have relation to the size of the dose, the form of the drug, the proximity to a meal, and swallowing the saliva. Also there are reported cases where the drug failed to produce any or very little diaphoresis; but these, too, were connected with the untoward symptoms just alluded to.

The after-effects are negative, and no unfavorable results have been observed when feeble patients were debilitated by the excessive sweating. It seems to be established that children are far less susceptible to its action than adults.

DOSE.

The larger number of experiments have been conducted with the four-gramme (sixty grains) dose of the leaves in infusion. At first the dregs and all were administered; but this is needless, and likely to provoke nausea, vomiting, and diarrhœa. A strained infusion of one drachm of the coarsely-powdered leaves to three ounces of water constitutes a full dose. The effect can be gained usually, and with less quantity, by giving half-ounce doses of the same infusion every thirty or sixty minutes, or the same effects can be maintained with less violence by continuing these doses at longer intervals. The cold infusion is equally efficacious with the tepid. A good deal of inert and spurious drug has been in the market, but the genuine can now be obtained. The fluid extract (sixty minims to the drachm) is in use, but my own observation is that this is more

likely to offend the stomach than the infusion. The pilocarpine (one grain representing one drachm of the leaves) will produce the same effects. The infusion per rectum will act equally efficaciously as if given by the mouth. A subcutaneous injection of one one-hundredth of a grain of atropia will arrest the diaphoresis produced by three or four grammes of jaborandi; and, preceding the drug, will prevent the diaphorésis.

MODE OF ACTION.

Bartholow classes it with tobacco, aconite, veratrum—agents which depress the motor functions of the spinal cord and sympathetic. Certainly the symptoms all point to a relaxation of the walls of the arterial system, and the suddenness with which they appear, to an affection of the center for the nerves supplying the vessels. All the appearances may be explained by the supposition of the laming of the central organ of the sympathetic nervous system, and it seems most probable that it is upon this organ that the jaborandi specially acts. (Berlin Klin. Woch., No. 11, 1877.)

INDICATIONS.

A drug that is capable of withdrawing, on the average, one sixth of the water of the blood might be supposed to be efficacious in causing the absorption of effused fluid in the system, preferably to vapor or hot baths with the subsequent packing (Deutsches Archiv. für Klinische Med., 1875), and is destined to occupy an eminent position among the sudorifics, sialogogues, and moderators of febrile action. (Gazetta Med. Lombardia, July 17, 1875.) Even where it is difficult to produce sweating by the ordinary means, the administration of jaborandi is followed by abundant perspiration. (British Medical Journal, February 27, 1875.)

"The therapeutic effect of jaborandi is analogous to that of the Turkish bath, and is indicated in rheumatism, anasarca from cardiac or renal disease; also in chronic bronchitis and emphysema, affections produced by cold, albuminuria, diabetes, the poisoning due to miasm or morbid poisons, the eruptive fevers which have been checked in their evolution."

CLINICAL HISTORY.

Anasarca.—There is a common consent that jaborandi rapidly relieves the anasarcous condition, no matter upon what cause it may depend.

Dr. J. H. Hunt, of Brooklyn, reports four cases which may be classed under this head.

1. Chronic desquamative nephritis, aged eighteen, anasarca general. Daily steam baths discontinued by reason of the superinduced sev ere prostration. One-drachm doses of fluid extract at night would produce profuse perspirations, awaking after an all-night's rest refreshed, though the pillows and clothes would be saturated with prespiration. The œdema was kept down, not completely subdued.

2. Aged sixteen; ankles and lower parts of legs œdematous, so that the skin lay over the top of the shoe in a fold. Half-drachm doses of the fluid extract caused free perspiration about the lower extremities and a gentle moisture over the entire body. In thirty hours ankle reduced to normal size.

3. Scarlatinal nephritis, aged six. Urine scanty. Ten-minim doses of fluid extract every three hours for a week kept up gentle perspiration, while the urine increased to five pints daily.

4. Aged thirty; fatty heart, ankles greatly œdematous. Ten-minim doses of fluid extract with infusion digitalis and cit. fer. et quinine produced "terrible" diaphoresis, as patient termed it, and in three days ankles reduced to normal size.

In all these cases the appetite improved during the administration of the medicine.

Pleuritic Effusions.—Mr. Crequy reports having cured effusions into the pleura by four-gramme doses when all other means failed. (London Med. Record, April 21, 1875.

Dr. Craig has found it efficacious in removing pleuritic effusions. For this disease, in his opinion, it will yet prove a most valuable medicine; for in a few hours, in addition to profuse perspiration, twelve or sixteen ounces of fluid may be withdrawn from the blood with very little disturbance to the general system, which must tend in no small degree to promote absorption of fluid from the pleural cavities. (Edinburg Medical Journal, January, 1876.)

Bright's Disease.—A case is reported from Bellevue Hospital treated partially by drachm doses of the fluid extract, where, in addition to the profuse perspiration, the remedy acted as a sialogogue to such a degree that twenty-two ounces of saliva were collected in four hours. (Medical Record, August 5, 1876.)

Dr. Bruen details seven cases where jaborandi was used to relieve the suffering caused by dropsy wherein uræmia appeared inevitable, and reports that he knows of no agent which will afford so great relief as this drug. The use of steam baths can not be substituted in its place. (Phila. Med. Times, April 14, 1877.)

Diabetes Insipidus.—Dr. Gubler found it of service on account of its sudorific properties. (Jour. de Ther., April 10, 1875.)

Dr. Laycock argues that the proximate cause of dropsy being the amount of water in the

blood, the disease has both functional and anatomical relations with the sudoriparous glands and the kidneys. He reports two cases. In one the urine declined steadily in fourteen weeks from three hundred to one hundred and twenty ounces; in the other, in seven weeks, the quantity of urine in twenty-four hours was reduced from one hundred and fifty-eight to ninety-eight ounces. (Lancet, August 14, 1875.)

Dr. Ringer had a well-marked case which was uninfluenced by jaborandi, but in which the quantity of urine was greatly reduced by ergot. (Brit. Med. Jour., December 25, 1875.)

Dr. Fairfax reports a case of a lady suffering for ten years with almost constant thirst, and a diuresis that amounted to an average discharge of a gallon every three hours; no perspiratory action of the skin; the bowels irregular; progessive emaciation; specific gravity of urine, 1.003. Half-drachm doses of the fluid extract at bedtime prevented sleep by the profuseness of the salivation. The dose was diminished, and used three or four times daily. In three months the quantity of urine was reduced to three pints in twenty-four hours and specific gravity 1.008.

Dr. F. reports another, a second case, of five weeks' duration. Diuresis very great; thirst intense; skin dry. Half-drachm doses of the fluid extract, twice daily, relieved all these symptoms; salivary glands active; skin moist; thirst relieved; the appetite improved; quantity of urine greatly diminished, and specific gravity increased. (Virginia Med. Monthly, April, 1876.)

Dr. Newman reports the case of a child, aged eight years, troubled for three years with excessive diuresis and almost constant thirst, depressed spirits, poor appetite, dry, scaly skin, tendency to constipation, general emaciation, debility, and some fever. Three gallons of urine excreted in twenty-four hours; two gallons during the night, of a light straw-color; specific gravity, 1.003 to 4; tests for albumen and sugar negative. Fifteen drops of the fluid extract, morning and night, continued from April 10th to the fall, effected permanent restoration. (Virginia Medical Monthly, December, 1876.)

Rheumatism.—MM. Robin and Gubler have employed jaborandi in acute rheumatism, and on the next day have noticed a lowering of the temperature and a remarkable diminution of the articular pains, which indeed almost entirely disappeared.

Dr. Tadlock reports a marked case of acute rheumatism cured in six days by jaborandi. (Med. and Surg. Reporter, May 19, 1877, p. 440.)

Asthma.—Dr. Gubler succeeded in five cases in aborting the attack by giving an infusion of the leaves, relief being obtained so soon as its sialogogue and sudorific effect appeared. He found the jaborandi to produce instantaneous amelioration of the asthmatic paroxysm of emphysema. To one man a cup of tepid infusion was administered during an excessive paroxysm of asthma, who fifteen minutes afterward began sweating and expectorating. Almost immediately after this the respiration became easy, the patient declaring that the malady had been taken from him as with the hand. (Jour. de Thérapeutique, April 10, 1875.)

Tetanus.—A case of tetanus following excision of the breast was treated by four-gramme doses of jaborandi daily for thirty-eight days, at which every symptom of the tetanus disappeared. It produced a very abundant salivation. (London Medical Record, April 15, 1876.)

Fevers.—Dr. Craig has used jaborandi in several cases of fever where the tongue was dry and the mouth parched, and, by giving small doses of the infusion every few hours, was enabled to restore the flow of saliva, keeping the tongue and mouth moist. (Edinburg Med. Journal, January, 1876.)

Mumps, Metastasis to Testicles.—Dr. Czernicki treated a case of orchitis consequent upon metastasis of mumps, utilizing its sialogogue properties to divert metastasis by increasing the functional activity of the salivary glands. (Gazette Hebdom., November 14, 1875.)

Surgeon-major Desbrousses records an entirely similar case successfully treated by the same remedy. (Gazette Hebdom., November 15, 1875.)

Influenza.—In severe cases with violent headache the sialogogue and sudorific effects of jaborandi greatly relieve the symptoms of this affection and shorten its duration. (Jour. de Thér., April 10, 1875.)

As a Galactagogue.—To ascertain whether jaborandi was antagonistic to belladonna in respect to its influence on the secretion of milk, Drs. Ringer and Gould instituted experiments in two cases. "We administered thirty grains of jaborandi to a woman, thirty-eight years old, confined of her ninth child for months previously. During suckling she had very little milk, and the quantity had become much less of late. We gave her the medicine at ten A. M. She had suckled her child seven hours before. In ten minutes the drug produced its usual symptoms; in half an hour her breasts, which previously were flaccid, became tumid and distended, and on pressure yielded consid-

erably more milk. In forty minutes the increase was still more marked, jetting forth n four or five streams. To another woman aged twenty-five, whose child is thirteen months old, we gave two doses of thirty grains, as the first had no effect. She emptied her left brest every ten minutes by pressure, and each of the three first emptyings yielded forty minims. As soon as the perspiration and salivation became free the quantity rose to eighty minims. The next time yielded one hundred minims; the following one hundred and fifty-five minims; the next time eighty minims. The salivation and perspiration at this time ceased. The next observation yielded one hundred and twenty-five minims; the next eighty-seven minims; the next seventy minims; and the last forty minims." (Lancet, January 30, 1875.)

Dr. Will details the case of a mother who had been unable to suckle her previous child on account of the want of milk, and whose breasts on the fourth day after delivery, despite all efforts, were perfectly flaccid, and on pressure not a drop of milk could be obtained. Half-ounce doses of the decoction were given (two and a half drachms to six ounces water) three times a day, a strong decoction being at the same time applied to the mammæ. After two doses milk appeared. It continued to increase in quantity, and in ten days the drug was discontinued, as the secretion seemed to be fairly established. The child has every appearance of being well nourished. (Brit. Med. Jour., September 15, 1876.)

Dr. Bartholow used a fluid extract successfully in a case of deficiency in the secretion of milk in a nursing-woman. "As the milk-glands correspond in structure to the sudoriparous glands, and are merely differentiated and specialized for their particular office, the effects of this drug in increasing the production of milk might have been, *a priori*, expected." (Materia Medica and Therapeutics, p. 387.)

Jaborandi and Belladonna.—Though jaborandi and belladonna are in so many ways antagonistic, it has not been found that pilocarpine proves of any benefit in belladonna poisoning

"The relation between belladonna and jaborandi is partly of analogy, but mainly of opposition. Jaborandi resembles atropia in quickening the pulse, flushing the face, and in exciting a more decided influence in adults than in children. On the other hand, it is diametrically opposed to atropia in its actions on the salivary, sudoriparous, and mammary secretions, on the pupils, and on the minute arteries. Further; the tendency of belladonna to cause delirium contrasts with that of jaborandi to cause prostration and sleepiness."

The sum of the recorded experience is that when diaphoresis is desired in any form of malady, it can be obtained promptly and surely by jaborandi, while the size of the dose and the frequency of administration will regulate the profuseness and continuance of the diaphoresis to meet any contingency desired.—*Proceeding of the Medical Society of the County of Kings.*

Pneumonic Fever.

GROUNDS FOR CONSIDERING ACUTE PNEUMONIA AN ESSENTIAL FEVER, AND NOT PURELY A LOCAL INFLAMMATION.

By AUSTIN FLINT, M. D.

Acute pneumonia, in the nosological systems of the present, as of the past time, is placed among the local diseases; and in regard to certain questions, especially in relation to blood-letting, it has been, and is now generally considered as the type of a purely inflammatory affection. The object of the paper which I shall submit to the Society is to show that this is a false view of its pathology, and that its proper place in nosology is among the essential fevers. That pneumonia is an inflammatory affection, I do not deny. It is the local manifestation, and furnishes the anatomical characteristics of a febrile disease, sustaining to the latter a relation analogous to that which the lesions of the solitary and agminated glands of the small intestines sustain to typhoid fever. I propose as a name for the disease pneumonic fever. This name, if it be established that the disease is not a purely local inflammation, is as appropriate as the name enteric applied to typhoid fever, or the name cerebro-spinal fever to the disease more commonly known as cerebro-spinal meningitis.*

I am perfectly aware of the duty of brevity in a paper to be read at a meeting of this Society, the sessions of which are short, and the number of papers submitted usually large. I shall present the grounds for considering pneumonia essentially a fever, and not purely a local inflammation, as concisely as possible, avoiding any discussion of the points which will be stated.

In order not to expose myself to the imputation of assuming to advance a doctrine alto-

* The term *febris pneumonica* was used by the older writers, but without meaning thereby that the disease was essentially a fever. "Lung fever" is a popular term, formerly somewhat in vogue in some parts of this country.

gether new, I wish to premise that the dependence of pneumonia on a morbid constitutional state is a view which, as I suppose, many, and perhaps most physicians hold. This view, indeed, is applicable to a considerable proportion of the diseases which are reckoned nosologically as local. Of late authors, Juergensen goes further than any with whose writings I am acquainted. This author holds the pulmonary inflammation to be merely the chief symptom of a constitutional disease; that the morbid phenomena are not due to the local affection; that a special cause is indispensable, and that pneumonia belongs to the group of acute infectious diseases.† These assertions are almost, if not quite equivalent to an enunciation of the doctrine expressed by the term pneumonic fever. The arguments offered by Juergensen apply fully to this doctrine; but there are cogent considerations to which he does not refer. In 1866 Dr. Wm. H. Draper, of New York, read to the Academy of Medicine a paper on the treatment of pneumonia, in which he maintained that the pulmonary lesion is a sequence, in point of time, of the pyrexia; that it represents a conservative process by which a *materies morbi* is eliminated from the circulation, and that there is presumptive evidence of the presence of a specific poison in the blood of persons suffering from this disease. I quote from his paper the following: "These considerations certainly lend support to the theory that pneumonia is something more than a local disease, and is rather an essential fever, having a characteristic lesion like small-pox or scarlet fever."* I have not taken pains to seek in medical literature for similar expressions of opinion. Doubtless they might be found; still, the fact remains, that in our systems of nosology, our treatises on pathology, our text-books of practice, our lectures on medicine, and in medical conversational intercourse, acute pneumonia is recognized as a purely local affection. It is, perhaps, superfluous to premise that by the term acute pneumonia I include only the so-called lobar form of the disease, the form distinguished by German writers as croupous, not embracing broncho-pneumonia nor embolic pneumonia.

The grounds for considering the disease an essential fever relate to its morbid anatomy, its etiology, its clinical history, and its treatment. Following this order, the points which I shall make I will embody, for the sake of brevity, in a series of simple statement or propositions.

1. In relation to the morbid anatomy of pneumonia, the quantity of exudation, amounting to from one to two pounds, if a single lobe be affected, and reaching four pounds if the affection embrace an entire lung; the probable derivation of this matter from the blood in the branches of the pulmonary artery; the removal of the exudation by absorption, leaving the air-vesicles intact; the extension over a lobe by degrees, the progress often being slow; the invasion successively of a second and a third lobe in a certain proportion of cases, and the laws of the disease, as regards the greater liability of the lower lobes, and of the lower lobe of the right lung—these are points which, to say the least, are suggestive of dependence on a constitutional morbid condition, the latter being essentially the disease. It is not easy to reconcile the pathological facts just stated with the doctrine that the products in pneumonia are the results solely of a local inflammatory condition; and if a prior constitutional condition be essential, in view of the symptoms of the disease, that condition is a fever. In some regards the anatomical characteristics of pneumonic fever bear a close analogy to those of typhoid fever.

2. Etiology furnishes support of the doctrine which I advocate in two points of view, namely:

First, the local affection is never produced by local causes; and, second, all the knowledge which we at present have of the causation is in favor of the primary actions of the cause or causes being constitutional.

Acute lobar pneumonia is always developed irrespective of any extrinsic agencies acting directly upon the pulmonary organs. Agencies which it might be supposed, *a priori*, would be followed by the disease, fail to produce it. Contusions, however violent, and penetrating wounds of the chest, never give rise to acute lobar pneumonia. It does not follow the diffusion of pus from empyema or an hepatic abscess. Circumscribed gangrene of lung does not lead to it. In bronchitis affecting the small bronchial tubes, the inflammation may extend to certain lobules, producing local effects, however, quite different from the anatomical characters of lober pneumonia, the latter never occurring, nor does it ever occur, as a sequence of acute pleurisy. Juergensen does not make too strong an assertion when he says that "croupous pneumonia can no more be produced by the excitants of inflammation than can the characteristic intestinal lesions of typhoid fever."

Pneumonia, as is well known, is not infrequently an intercurrent affection in the course of

† Ziemssen's Cyclopædia. American edition, vol. v., p. 144. The term *infectious* is to be understood as defined by German writers, namely, as disease produced by a special cause, or germ, which is capable of being reproduced or multiplied under favorable conditions, either within or without the body.

* Bulletin of the New York Academy of Medicine, vol. 11, 1866.

other essential fevers, namely, typhus and typhoid fever, measles, diphtheria, etc. In these instances the determining cause must be constitutional, and yet, as the affection is only an occasional complication, the determining cause involves something which does not necessarily pertain to these fevers. This something, it is reasonable to conclude, is pneumonic fever. Hence, it follows that pneumonic fever may be associated with other febrile diseases. The blending of different fevers may be considered at the present time as a well-established pathological doctrine. An example with which all of us are familiar is the typho-malarial fever.

It is evidence that pneumonia is a constitutional disease (and if so, it must be an essential), if it involves a specific causation. A specific cause, with our present knowledge, is not demonstrable; but this confession is to be made respecting other essential fevers—for example, malarial fever. A conclusion can only be reached by the logical force of facts. Certain of these facts belong to the morbid anatomy and to the clinical history. Etiological proof of a specific causation is afforded by the prevalence of the disease at certain seasons of the year, namely, the vernal months in this climate, and its comparatively infrequent occurrence at other seasons. Proof is also afforded by the fact that the disease is far more prevalent in some climates than in others. In our country it is vastly more frequent in the Southern than in the Northern States. Still further proof is afforded by the fact that, at certain times and in certain situations in the South, it has been known to prevail to an extent entitling it to be called an endemic. To these facts it is to be added that at different periods and places the variations of the disease as regards its phenomena and the rate of fatality, constitute a point of distinction from purely inflammatory affections, and affiliate it with the essential fevers.

3. Passing to the clinical history of pneumonic fever, the grounds for using this name instead of acute lobar pneumonia are hardly less substantial than those furnished by the etiology of the disease.

The chill, which is usually the first symptomatic event, is more pronounced than in the history of any purely local inflammatory affection. It is often as marked as in the cold stage of a paroxysm of intermittent fever.

The fever which follows quickly rises, and often in a few hours becomes intense. It is not uncommon for the temperature of the body to be five or six degrees above the normal limit in from four to twelve hours after the attack. Now, this cannot be a symptomatic fever, for within these periods, and often for two or three days, the pneumonic inflammation is so limited as not to furnish the distinctive and easily determined physical signs of the local affection. Contrast, as respects the intensity of the fever at the outset, pneumonic fever with acute pleurisy!

During the course of the disease, the fever, as represented by temperature and other symptoms, has no uniformity of relation with the pulmonary affection. It is impossible to determine by means of the thermometer and by the pulse, together with other symptoms, when the local affection has extended over an entire lobe, or whether more than a single lobe be involved. What is true of typhoid fever, in respect of the influence of the intestinal lesions upon the febrile phenomena, is equally true of pneumonic fever.

As in typhoid, so in pneumonic fever, defervescence is not determined by conditions which relate to the local affection. Defervescence sometimes begins and ends within twelve hours, or even less, and during this time the physical signs may show that no very marked change has taken place in the pulmonary organs. Pneumonic, like typhoid fever, ends from self-limitation—that is, it ends when the disease has finished its career. The duration of this career varies considerably, it is true, in different cases, but it is, nevertheless, self-limited. It is not uncommon for the career of the fever to end when there is much to be done in the way of resolution, before the restoration of the normal pulmonary condition is complete.

The analogy to typhoid fever, which in several points of view is apparent, is further shown by the frequent occurrence in pneumonic fever of what are known as typhoid symptoms. It is true these symptoms occur in various diseases; but I am warranted in saying that they occur in pneumonic fever far more frequently than in any other disease, excepting, of course, typhus and typhoid fever. They certainly cannot be attributed to the interruption of the respiratory function, for they are rarely frequent in other affections which occasion greater disturbance of this function—for example, in pleurisy, capillary bronchitis, and asthma. They are undoubtedly due to the fever, irrespective of the pulmonary affection; and, in this point of view, pneumonic resembles typhoid fever.

Pneumonic fever differs from most local inflammatory affections, and resembles most of the essential fevers, in the fact that when the career of the disease has ended, there is no immediate tendency to a relapse. In a large

number of cases which I have recorded, in not a single instance was a relapse noted; and I cannot recall an instance in my unrecorded experience. Is there not in this fact, solid ground for the doctrine that the disease is an essential fever? Another striking fact may be mentioned in this connection, namely, the pulmonary affection never persists in a chronic form. The forms of chronic pneumonia, that is, ordinary and fibroid phthisis, are anatomically distinct from lobar pneumonia; nor does clinical experience substantiate the opinion held by some that phthisis is a sequel of acute pneumonia. It may be asserted of pneumonic, as of typhoid fever, that if death do not take place from either the disease, its complication, or its accidents, recovery follows without any risk of the persistence of the local affection in a chronic form.

4. The therapeutic influence of certain remedies and of antipyretic measures furnishes ground for the doctrine that acute lobar pneumonia is not purely an inflammatory affection.

As long ago as in 1861 I was led, by the results of the analysis of a considerable number of cases in which the sulphate of quinia was givin to the extent of only 15 grains daily, to the conclusion that this remedy exerted a marked curative influence upon the disease. I can now bear testimony to the fact that, given in larger doses, namely from 20 to 40 grains daily, this remedy, in a certain proportion of cases, renders the disease abortive, and that, when this result does not follow, the disease is often favorably modified in a greater degree than by smaller doses. There is reason to think that salicin, in like manner, has a curative influence; the relative value of the remedy not being, as yet, determined by clinical experience. Now, whatever efficacy belongs to these remedies, proceeds, evidently, not from any direct effect upon the pulmonary affection, but from a controlling influence over the pyrexia; hence sustaining the doctrine that the disease is an essential fever. Juergensen, Liebermeister, and other German writers claim, as a conclusion based on clinical experience, that the reduction of the high temperature of the body by cold baths employed as in cases of typhoid fever, lessens the severity of the disease and the rate of fatality from it. Accepting this conclusion, it is further evidence of the correctness of the doctrine.

Assuming that there are grounds sufficient for adding to the list of essential fevers *febris pneumonica*, or pneumonic fever, we may define the disease as follows:

It is a fever characterized anatomically by an abundant exudative deposit in the air-vesicles of a single lobe, or of two, and sometimes three, lobes of the lungs, with, in general, circumscribed bronchitis and dry pleurisy. It is a fever which rapidly reaches its maximum of intensity, and has a short career, the duration averaging about eleven days. It proves fatal chiefly in consequence of associated diseases, complications, or accidents, and the mode of dying is by asthenia. It is non-communicable, and depends on a cause, or on causes, specific in character, the nature of which is at present unknown, but having relations to season and climate. It sometimes aborts spontaneously; and it is in some instances arrested by remedies. If not arrested, it may be favorably modified, its duration abridged, and the danger to life diminished by treatment addressed, not to the pulmonary affection, but to the fever.

The doctrine which it has been the purpose of this paper to advocate is of interest, regarded simply from a pathological stand-point. It is, moreover, important in a practical aspect, leading the practitioner to regard the rational objects of treatment as relating to the essential disease, that is, the fever, rather than to its local manifestations, and in this way bringing pathology into unison with therapeutics based on clinical experience.—*The Medical Record.*

AMERICAN MEDICAL ASSOCIATION.

Section on Medical Jurisprudence, Chemistry, and Psychology.

Dr. Eugene Grissom, of North Carolina, Chairman.

First Day.—Tuesday, June 5th.

RELATIONS OF SPIRITUALISM TO MEDICAL JURISPRUDENCE.

Dr. John P. Gray, of New York, read a paper upon the above subject, which consisted largely of a critical examination of the Ward will case. Dr. Gray arrived at the following conclusions:

1. Spiritualism must not be taken as evidence of insanity. 2. A belief in communications from the unseen world from supernatural messengers is not an insane delusion. 3. The belief that mediums can communicate with the dead is not an insane delusion, for no evidence has been as yet presented of the truth of such communications having been made. They are mere assertions of the so-called mediums. 4. The implication of fraud must stand against all such persons or communications, as the dead party cannot be reached except through the

so-called medium, and therefore the living party to whom the communication is made has no power of communicating with the dead. The whole is received simply through the medium. 5. Such communications cannot be received in courts of law, as they are excluded by the rule of rejecting conversations not held in the presence of both parties. 6. If Spiritualism is espoused as the result of the disease of the brain, being before repugnant to the belief and mental operations of the individual, then it is an insane delusion. Spiritualism must be received simply, under such ruling of the court, as under influence. When it is a fraudulent influence, or conspiracy in the case of writs or contracts, then the writs and contracts made under such influence must be void. 7. The most serious questions would arise where a person should attempt to commit homicide under the direction of the so-called spirits. The presence of a medium in such a case would suggest fraud and conspiracy. If the individual was a Spiritualist through life and before the time, no insane delusion can be found in a brain disease. He would have to stand in that case upon the same platform as ordinary criminals. 8. Spiritualism can only be considered as an occasional delusion, and not as a cause or form of true aberration. It stands on the same footing as witchcraft, vampirism, etc. 9. The medico-legal bearing must be determined by the facts in such a case, whether it is an insane delusion or simply entertained as a speculative belief with reference to the unseen world in the possible condition of men after death. Medical science can take no cognizance of it as a speculation more than it can of any other.

The paper was referred to the Committee on Publication.

SECOND DAY.—WEDNESDAY, JUNE 6TH.

Dr. J. R. BLACK, of Ohio read a paper on

THE LAWS OF HEREDITY, WITH SPECIAL REFERENCE TO THE TRANSMISSION OF MORBID TENDENCIES, ABNORMAL FORMS, AND THE EFFECTS OF INTERMARRIAGES,

of which the following is a brief abstract:

The improvement of domestic animals had long been deeply considered in all communities, and some, though weak, efforts had been made to improve the physical and mental condition of mankind. There was little wonder that the king of animals should be in his present degraded condition, for his physiological welfare had been practically neglected. Either man was exhausted by excessive work or dwarfed by almost entire inaction. Even when some portions of the system were properly looked after and developed to a high standard, other portions were degraded by neglect or inaction, which often resulted in the deterioration of the whole systen. Efforts were indeed being made to improve this state of affairs. Children were fed with plainer food and made to take more exercise. The evil of hereditary taints and the evil of intermarriage were not acknowledged, or at least not heeded. In Connecticut and Rhode Island the evil of intermarriage among relations was so great that the people were gradually dying out, and the birth rare among this class was growing less year after year. The result was, and the same course of action would only make it more so, that now nearly one-half of the populatian of such communities was spent in looking after the other half. In such communities the cases of inherietd diseases of many kinds were fearfully numerous, and the cases where persons were entirely free from inherited diseases were very few; but few of such could be found who were entirely free of diseases inherited from parents. The speaker then referred to the statistics of hereditary diseases, and the various types of them. In mentioning the number of those afflicted with hereditary diseases, he stated that among ninety-three physicians and their wives, of whom reports had been presented, only fifteen males and eighteen females were rpeorted as entirely free from an inherited predisposition to disease. A careful study had shown that there was no differential law of descent in reference to the sexes of those who were suffering from inherited disease, or of the tendency to the limitation of a defect to the sex in which it originally appeared.

The reader of the paper then spoke of the curious fact that among the Jews, where full statistics had been taken, there was greater longevity than among the Germans, among whom they lived; that the average life of the former was eleven years longer than that of the latter. In describing special cases, he described numerous interesting cases,. in one of which the child, when in bed, moved its big toe about in the same way in which its mother had done. Like things begot like things, and the capriciousness that sometimes appeared, or which was thought the appear, was only apparent; it was not real.

From the statistics which the Doctor had been able to collect, the conclusion was reached regarding

CONSANGUINEOUS MARRIAGES

that the chances of the issue having well-formed bodies and sound minds where so small

that the strongest legal enactments against them were justified.

In conclusion, the lecturer declared that the more the primitive phases of civilization were considered the more apparent did the fact become that the somewhat violent hardships and privations to which life was then exposed fell with special force on the weak and helpless, and little, if at all on the vigorous, thus tending to the elimination of the one and the perpetuation of the other. It was apparent, further, that few persons possessed the strengh of mind necessary to abstain from the prepetuation of the species, simply because they inherited a congenital disorder. Yet even this fact had an outcome not to be deplored. High intelligence, strong wills, and consistent behavior would survive, while feeble-minded ignorance volitions unstable as water would carry the blood on to imperfection, disease, and extinction.

The Action of Certain Manipulations and Reagents on Calomel.*

BY FRED. M. CORWIN, PH. G.

Mercury forms two classes of salts, one containing proportionately twice as much acid radical as the other, and each convertible into the other by certain agents.

The mercurous chloride, or calomel, is mild in its action on the human system, being a safe and much-used remedy.

The mercuric chloride, and mercuric salts in general, are powerful and corrosive agents, often producing serious and fatal results.

The object of the following experiments was to ascertain whether *mercuric* salts were produced from *mercurous* (namely *calomel*) by the agents and methods described.

The agents were either physical or chemical.

The physical agents were trituration, boiling with water, and sublimation.

The chemical agents were certain dilute acids and salts of the U. S. P.

The tests used for the detection and identification of mercuric mercury were metallic copper and hydrosulphuric acid in strongly acidified solutions.

In all cases where a deposit is obtained on copper, the copper, after being thoroughly washed and dried, was placed in a clean dry test-tube and heated to redness.

If mercury was present it sublimed and collected in a cooler part of the tube. A crystal of iodine was then placed in contact with it, and heat again applied, when the yellow iodide of mercury turning red by friction sublimed in another part of the tube.

The hydrosulphuric acid was added in small portions at a time, producing at first a light colored precipitate, turning yellow, orange, brown and black as the successive portions were added. This reaction is characteristic of a mercuric salt.

Several attempts to obtain absolutely pure calomel proved unsuccessful. That used, being the purest which was examined, was found to contain a small quantity of ferric iron, probably as ferric chloride.

1. PHYSICAL AGENTS.—a. *Trituration.*—About two drachms of calomel were rubbed in a dry porcelain mortar. On moving the pestle through it with pressure, it produced shining *straw-yellow* streaks, and the whole powder gradually assumed a yellowish tint. After rubbing for half an hour it was macerated with water, filtered, and the filtrate acidified with hydrochloric acid.

Copper: no action. Hydrosulphuric acid: no action.

b. *Boiling.*—1. About two drachms were heated in a flask with water, on a water-bath, for fifteen minutes, the mixture filtered, the filtrate evaporated about one-half on a water-bath, and acidified with hydrochloric acid.

Copper: no action. Hydrosulphuric acid: no action.

2. About two drachms were boiled in a flask with water by direct contact with flame, and under agitation, for fifteen minutes, filtered, the filtrate evaporated about one-half on water-bath, and acidified with hydrochloric acid.

Copper: *a deposit.* Hydrosulphuric acid: *characteristic precipitate.*

c. *Sublimation.*—1. About twenty grains were heated in a dry test-tube, the heat being only sufficient to slowly sublime it. It was then macerated with a small quantity of water, filtered, and filtrate acidified with hydrochloric acid.

Copper: no action. Hydrosulphuric acid: no action.

The sublimate was perfectly white.

2. About twenty grains were heated so as to sublime rapidly, the glass becoming red hot. It was macerated with water, filtered, and the filtrate acidified with hydrochloric acid.

Copper: *a deposit.* Hydrosulphuric acid: *characteristic precipitate.*

The sublimate had a grayish appearance in places, probably due to metallic mercury.

* From a thesis presented to the College of Pharmacy of the City of New York.

* On the reaction of calomel and hydrocyanic acid, see a paper by T. H. Powell and J. Bayne, in *Pharm. Jour. and Trans.*, April 8, 1879. *New Rem.*, v., 139.—ED. N. R.

II. Chemical Agents.—a. *Acids.*—The acids used were the dilute acids of the Pharmacopœia. About a drachm of calomel was placed into a five-inch test-tube, the tube was nearly filled with an acid, and allowed to macerate for three days, being agitated occasionally. It was then filtered and the filtrate evaporated about one-half on a water-bath.

With some acids a change was noted in the appearance of the calomel: with others it remained unaltered.

The following table exhibits the results.

Acids.	Copper.	Hydrosulph. Acid	Appearance.
Hydrochloric.....	Deposit.	Characterist. ppt.	Unchanged.
Nitric.....	Not used.	" "	"
Sulphuric.....	No action.	No action.	"
Hydrocyanic.....	Deposit.	Character'ic ppt.	Turns dark.
Nitric-hydrochlo.	Not used.	" "	Unchanged.
Phosphoric.....	No action.	No action.	"

b. *Salts.*—Of the salts used, sixteen were in solution with water. The solutions were made by dissolving one part of the salt in ten parts of water, with one exception, namely, the potassic chlorate solution, which was made by dissolving one part of the salt in twenty parts of water.

About half a drachm of calomel was placed into a five-inch test-tube, the tube nearly filled with a solution and allowed to macerate three days with occasional agitation. It was then filtered, and the filtrate acidified with hydrochloric, nitric or sulphuric acid, according to the character of the salt.

With some of the solutions a change was noted in the appearance of the calomel, either immediately or on standing.

Solution of	Copper.	HydrosulphAcid.	Appearance.
Potass. Bromide.	Deposit.	Characteris. ppt.	Lead color.
" Chlorate.	No action.	No action.	Unchanged.
" Cyanide..	Deposit.	Characteris. ppt.	Dark nearly black
" Hypophosphite	No action.	No action.	Unchanged.
" Nitrate..	"	"	"
" Sulphate.	"	"	"
" Sulphite.	"	No ppt. Separation of S.	Greenish gray.
Pot. & Sod. Tartra.	Deposit.	Characteris. ppt.	Unchanged.
Ammon. Bromide	"	" "	Slate color.
" Chloride	"	" "	Unchanged.
" Iodide...	"	Orange red ppt., which gradually turns dark, same as $HgCl_2$ in NH_4I.	Turns yellow, then dark with green tint. Solution is yellow.
" Nitrate..	"	Characteris. ppt.	Dark at the point of contact. Gray on agitating.
"	"	"	Unchanged.
Sodic Chloride...	"	"	"
Ferric "	No action.	No action.	"
" Pyrophos..	"	"	"

Of the two following salts, about a drachm of each was rubbed, with an equal bulk of calomel, in a porcelain mortar for fifteen minutes. They were then macerated with a small quantity of water, filtered, and the filtrate acidified.

Filtrate from.	Copper.	Hydrosulphuric Acid.
Bismuth Subnit..	No action.	Peculiar ppt. Not characteristic of mercury.
Ferric Ferrocya.	"	No action.

—*New Remedies.*

For Journal Materia Medica.

Elixir Iodo in Treatment of Malignant Ulcer.

Akron, O., July 8th, 1877.

Editors Journal Materia Medica:

Dear Sir—The case to which I alluded in my last note to you, was that of a miner in this neighborhood, a married man about forty, who, while in England in 1867, got shaved in a barber shop in Langton, where he was cut by the barber on the upper lip. The cut did not trouble him for some little time though it did not heal quite up; he used, he says, to rub off the scab when washing frequently, and thus kept it sore and gradually getting larger, still he felt little or no concern about it until another sore of like character, formed about an inch from the first; this after a short interval became more angry and violent than the first, but not until ulcers had broken out on his left hand, and had made such progress as to render him unable to work any more. Seeking medical aid he then applied to the infirmary or hospital of the place, where he was treated continuously for about a year, but without effecting a cure. Finally he got a note from a lady to Doctor Hawkins of the place, promising to pay the fee if the Doctor would give the necessary attention and treatment, which he did, and effected a cure of the hand after some time, which has not since troubled him, but not so with the lips and face. The ulcers here continued to give more or less annoyance from time to time, until he came to this country three years afterwards, where he represents, it got, to use his own language, neither better nor worse for about two years. At this time he had occasion to take a long ride on a cold winter day, when he was exposed to the severe cold of snow and hail for several hours. After this, the face and nose became very much worse, and notwithstanding the application of all the salves, washes and ointments, (these he had from the beginning in abundance), it continued to grow worse; he then applied to some two or more physicians here, under whose care

he was benefited some, but as soon as he exposed himself to the cold, he was as the Dutchman says, "Yust as before."

I became acquainted with him about three years since, and on examining him, found this condition. On the upper lip in the medium line was an ulcer about as large as a Quarter of a Dollar; a little below to the left, was another of a similar character but not quite so large; then above those were three others, similar in every respect, and a fourth and a larger one than either attacked the base of the left alæ nasi, very malignant and more difficult to control than any of the others, then away back in the posterior nares, was another which seemed eating its way into the osseous process beneath; the discharge from this was very offensive indeed, requiring the constant use of detergent and astringent washes to make his presence at all tolerable. The face at this time presented a hideous, disgustful aspect, and the poor fellow felt it keenly whenever alluded to by his friends. That you may the better appreciate the character, I will try to describe the formation of those ulcers. In their commencement, they were scaly and of a copper or reddish brown color, small copper-colored spots first showing themselves, the cuticle then peeling off, then scabs forming, suppuration will take place under them resulting in what I call a secondary venereal ulcer, having a raised surface from which a semi-white and red matter oozes constantly, very offensive; when he applied to me I put him on the following treatment:

℞ Hydrarg. Proto-Iodide, gr. ¼ No. xx.
S. One three times a day before meals.

Kept him on this treatment until forty pills were taken, keeping his bowels open with gentle aperients. Dressed the ulcers by first getting them thoroughly cleansed, then touched them over with Acid Nitro-Hydrochlor. then cleansed them out with hot water, when I dressed them with a mixture of Carbolic acid and Glycerine. After obtaining the effect I desired from the pill Hydrag. Proto. Iod., I put him upon the following:

℞ Tr. Cinchona Co..... ℥ viij.
Potass. Iodide..... ℥ viij.
M.
S. A teaspoonful every 3 hours.

Under this treatment there was marked improvement for a considerable time, so marked indeed that the patient was full of hope of permanent recovery, but he was no sooner exposed to severe cold and wet than the face broke out as he expressed it, even worse than before; the ulcers certainly looked more virulent and violent but I said encouragingly, "never mind Bill we will get at it again and this time I hope with more permanent results." This time I put him upon

℞ Hydrag Bi-Chlor.....gr. viij,
Alcohol.....q.s.
Syr. Stillingia Comp..... ℥ viij.

S. A teaspoonful morning, noon and night; this I kept him on for a month, without letting up even for a day, using at the same time the Lotio Flava as a wash, and applying lint saturated in the lotion as a dressing. Under this treatment, at the end of the second week the ulcers began to wear a more healthy look, and at the end of the fourth they were all clean, granulating healthily and very much diminished in size, looking as though closing in upon themselves: continued the treatment, and had the satisfaction at the end of the ninth week, of seeing them all closed up, and he said to me on my inquiry when I met him on the road late one evening, "How are you Bill?" "I am BETHER Doc, they are all closed up and I *feels furst* rate." Continued the Comp. Syr. Stilling. and Potassa Iodide until he'd no more of it, and stood forth Shakespearian style and "threw medicine to the dogs", and no wonder he would for he had had enough of it, according to his own account both in the old country and in this; he said he had salves enough to fill a hogshead: but his joy was only transient: he had been working in water for two or three weeks successively, eight months after they had healed up as he supposed permanently, and indeed I was not without hope that it was so myself, but he was afterwards exposed to severe cold and several thorough drenchings, when, out they came again, first one and then another, the formation the same, in type and character, in all respects as described above. I was now about tired of the case, first because there was little to it, other than the glory should I accomplish a cure, and glory you know, will not keep a man long, especially if he has an appendage in the way of a family; next I felt that although my effort was earnest and my remedies powerful, yet I had not succeeded in accomplishing much, if any thing, still I hated to have it said that I failed. I therefore got to studying up my case, and while thus engaged my boy handed me the Journal of Materia Medica just from the Post Office, and in glancing over it my eye fell upon a short article from a Doctor in Iowa, giving an account of a case treated with Elixir Iodo that corresponded in so many of its features with the one I had then under consideration, that I determined at once to give it a trial, and did so I am pleased to say with the very best

results. I kept him on it straight four months using this formula,

℞ Elixir Iodo..... ℥ viij.
Iodide Potassa..... ℥ i.

M. S. A teaspoonful before meals and on retiring to rest.

I used the Lotio Flava as a wash, with the lint dressing, which adhered to the sores very tenaciously thus protecting them from cold as effectually as adhesive plaster, and yet permitting them to be kept moist which contributed not a little to hasten the healing process.

He has now passed through the winter and spring, during which he has been much exposed to both wet and cold and worked hard all the time, yet looks hale and hearty, the face clean, free of all eruptions, erubescent in appearance with no evidence whatever of its former condition other than cicatrices, and the loss of a small piece of the ala nasi of the left side.

I have given the Elixir Iodo since then, in othercases, very fair trials without any addition whatever to it, and always with the most satisfactory results, the details of which I will give you at an early day if you desire it, and I can find time enough.

Fearing that I have written too much, and said little to interest you or any one else, I close this hoping to do better the next time. I remain very respectfully yours,

J. D. KEEGAN, M. D.

Hereditary Epilepsy.

It is well known that Dr. Brown-Séquard has discoverd that certain lesions of the spinal cord or the brain, or the sciatic nerve, in Guinea-pigs, will give rise to an epileptic malady in these animals. In from three to six weeks after the operation, it is found that an alteration in the nutrition takes place in an area of skin, which is limited by a line starting from the outer canthus of the eye, and running to the median line of the upper lip enclosing the nostril, thence backward, enclosing the lower jaw to the anterior portion of the shoulder to the median dorsal line, to the base of the ear and the inner canthus of the eye. The alteration in nutrition takes place on the side corresponding to the injury. It consists in this, that the faculty of feeling pain, heat and cold, disappear by degrees, while tactile sensation appears to be exalted. In a few days it is found that tickling this zone of skin will give rise to twitchings which are limited to the muscles of the eye and the eyelids on the same side. Later, the muscles of the mouth and of the face participate; still later the contractions become more general, until this whole side becomes the seat of convulsions; then the convulsions attack the other side also.

When things have come to this point the convulsions precede, by a very short time, a complete loss of consciousness. If the subject of experiment be a white Guinea-pig, it is found that there is paleness of the face, but in all cases there is a little foam at the mouth and dilatation of the pupils. In some cases the animal utters a cry, probably corresponding to the epileptic cry in the human species. Not only are the convulsions identical with those in epileptic man, but there is also loss of consciousness, a state of torpor, stupidity, and even in some cases something like insanity.

It happens that such animals recover spontaneously, and in so doing, all the phenomena described above occur in a reverse order, and the zone of skin regains its lost functions. When the epilepsy is due to the destruction of the sciatic nerve, the foot of that side loses the two outer toes, so that the animal has only one toe, the inner. When young are born to such a parent or parents (for it matters not whether one or both of the parents have been operated upon) they have this peculiarity of having only one toe on the posterior foot. Sometimes, however, they have additional toes, which in this case are attached by a pedicle to the limb.

Now all these peculiarities which have been observed in the parents, all things in all their details, are witnessed also in the Guinea-pigs, hereditarily born toeless, who have developed epileptic phenomena. There is, therefore, an inheritance of a power to develope the disease, but no inheritance of the disèase itself. Dr. Dupuy has examined the sciatic nerve of such animals and found them healthy, before, during, and after the existence of the disease. He has also followed these experiments through five generations.

Dr. Dupuy made allusion to the doctrine of Balbiani on embryogeny, and thought that, according to Balbiani's laws, the phenomena of inheritance, in the case of epilepsy, could be explained, epilepsy being a malady of nutrition like all other nervous diseases. Dr. Dupuy stated that only those young which are born with alteration in the normal nutrition of parts become epileptic; in such the disease fatally occurs.

HEREDITARY TRANSMISSION OF PECULIARITIES.

It was a report of a curious case of heredity. Dr. Dupuy stated that he owed to his friend, Dr. Gibney, the opportunity of observing a family consisting of father and mother, five

children, and one grandchild. The father and mother are semi-ambidextrous. All of the children and the grandchild are ambidextrous to an annoying degree: all of the movements which they perform with one hand are simultaneously performed by the other hand. The girls are obliged to use only one hand when dressing, or when cutting patterns, and hold the other hand down by their side, because the two hands perform the same movements at the same time, and would interfere with each other.

Attention was called to the fact that the father of the grandchild was not semi-ambidextrous. Dr. Dupuy has made experiments upon these persons, and has found that, if the skin of the forearm on one side be kept well dry, and a rapidly interrupted electrical current be used, so as only to call forth reflex actions, it is possible to induce synchronous movements in the fingers of both hands, and also muscular contraction in the lumbricales muscles of the fingers, which are too rapid to be carried on by the will. Dr. Dupuy considered these facts of great interest when coupled with the facts which he reported yesterday about hereditary epilepsy.—*Medical Record.*

Therapeutics.

Uses of Bromide of Camphor.— (*London Lancet*, March, 1877.) This new drug was discovered by Swartz, in 1862, and accidentally employed for the first time by Deneffe, in 1871. Of the physiological action, it may be stated, that Bromide of camphor diminishes the number of beatings of the pulse, causes contraction of the smaller blood-vessels, lowers the temperature and subsequently induces a more or less marked tendency to sleep. Deneffe, O'Hara and Berger, have employed it in delirium tremens. The first two advocate its employment as beneficial, whereas Berger makes some reservations. In insomnia and especially in the forms associated with heart lesions or cerebral hyperæmia, Bourneville, Lawson and Pathault declare they have observed encouraging results. Reimer and Hammond say that it is of use in spasms or convulsions brought on by teething. Of those, who have employed it in epilepsy, some think that they have seen the fits become more and more rare under the influence of the drug, while others have only noticed a remarkable diminution in the vertigo or petit mal. Chorea and hysteria are the nervous disorders in which the bromide of camphor has been most extensively used, and with the best effects Reimer speaks of the bromide with praise, in reference to a case of hysterical excitement, Bourneville, in cases of epileptic delirium in females, and Tommasi in hysteria with genital erethism and Hammond in a case of chronic hysteria. The benefit arising in hysteria from a methodical use of the drug is also highly spoken of by Profs. Vulpian, Lorain and Potain. "In cystitis of the neck of the bladder," says Dr. Lannelogue, "the action of bromide of camphor speedily shows itself. 1. When cystitis is painful and the pain is not dependent on any organic lesion (neuralgic cystitis). 2. In cystitis of the neck, having a congestive cause connected with a vascular change of the neck. 3, The action is more marked when catarrh is mild and when acute prostatis is added to inflammation of the neck of the bladder. Dr. Petrovitz has recorded some interesting cases where painful erections during an attack of gonorrhea were speedily arrested by this remedy. It is best administered in the form of dragees for children and in capsules for adults.

Determination of Urea in the Blood.

P. Picard has recommended a method for determining the quantity of urea in the blood, which offers two advantages: 1. It requires but a small quantity of blood, and therefore permits a repetition of the experiment upon different portions of the blood of the same animal. 2. The process is simple and sufficiently accurate. It is as follows; 50 gm. of blood are boiled, under constant stirring, with 50 gm. of crystallized uneffloresced sodium sulphate. The original weight is then restored by the addition of water. The whole is transferred to a filter, or it may previously be expressed and then filtered. Of the clear filtrate 50 gm. are weighed, introduced through a tubulated and fauceted funnel into a flask provided with an exit tube. The funnel having been rinsed with water, which is likewise allowed to run into the flask, 20 cc. of pure hydrochloric acid are added, and heat is applied until the air has been expelled. At this moment the exit-tube is connected with a series of wash bottles containing solution of baryta. The first part serves to retain the carbonic acid produced by the decomposition of urea, the last prevent the access of atmospheric carbonic acid. Everything being ready, about 20 cc. of commercial "nitrous acid" (nitric with nitrous acid) is allowed to flow, from the funnel into the flask, which is rapidly heated to 100° C.. which temperature is kept up for 8–10 minutes. The urea is thereby completely destroyed, and the escaping carbonic acid is arrested by the baryta. Finally the resulting

barium carbonate is decomposed by hydrochloric acid, and the carbonic acid is collected in a graduated tube. Each cubic centimetre of carbonic acid gas corresponds to 0.002683 gm. of urea. Now, as 50 gm. of liquid were employed, which contained the urea of 25 gm. of blood, it is only necessary to multiply the number of centimetres with 0.002683 and with 40, in order to obtain the amount of urea contained in 1 kilogramme of blood.

In one experiment 14.5 cc. of carbonic acid were obtained, which corresponded after the correction for temperature and pressure to 13.125 cc. This would be equivalent to 0.03515 gm. urea in 25 gm. of blood, or 1.405 gm. urea in 1 kilogramme.

Blood examined in this manner always shows the presence of urea. The author found in the arterial blood of dogs as a mean, 1.431 gm. of urea per kilo. Under normal conditions this quantity varies little. And between arterial and venous blood the author has observed a constant proportion of difference.—*Pharm. Centralh.—New Remedies.*

Treatment of Hydrophobia.

The treatment at most is only palliative. Any treatment should commence *immediately* after the sufferer is bitten. *Cauterization is a humbug.* It is never timely, and never can be. The virus has done its mischief in a few minutes; but a favorable prognosis, it seems to me, may be given by an antiseptic course. Alcohol in some form is a common agent in treating insect and serpent bites in all warm climates. I will state a case. My servant-man, in Brazil, was stung on the shoulder by a scorpon, probably dropping from some decayed wood which he was carrying. He was immediately in dreadful agony and almost faightened to death, I promptly saturated his shoulder over the affected and swollen spot with rum, and dosed him with it to stupefaction. Within half an hour he was in a sound sleep, and awoke therefrom well, the swelling disappearing as rapidly as it gathered. So in case of a person bitten by a mad dog, or supposed to be, I would saturate the wound with our best antiseptics, and keep supplying them, by means of saturated compresses, until healed; and as promply I would dose the patient with milk-grog to stupefaction, and put him to bed under heavy and warm covering to promote prespiration. This treatment for twenty-four hours at least would seem sufficient as far as the bed is concerned, but a moderate use of the milk-punch should be continued until a sufficient time has elapsed to make all danger improbable. To the punch might be added a grain or more of some of the antiseptic salts now so much employed in practice. Prohibitionists and perhaps the sufferers might object to the alcohol. They can have it in small doses by the hypodermic process, or in lieu of that can use some other antiseptic. The aim is to mollify the poison or eradicate it from the system; and the use of antiseptics, as we understand their action, is a common-sense way of treating hydrophobia or any other disease produced by the absorption of poison. Dr. Francois rightly used alcohol, and it is a pity that he did not carry it further. It seems to us that any attempt to administer it by the mouth in extreme cases in useless. Better to rely on *alcoholic milk injections* repeatedly administered till stupefaction is produced, and above all things, to have pluck in doing it.—*Louisville Medical News.*

Betz on the Use of Ice in Croup.

Dr. F. Betz (*Memorabilien*, 10 Sept., 1876) recommends in cases of croup the application to the front of the neck of a bottle or bladder filled with finely powdered ice and fastened by a light bandage. When the temperature is high, salt is added. The bottle must not be allowed to remain until the ice is completely melted, but be renewed before this occurs. By this treatment, the temperature of the anterior part of the larynx and trachea is lowered, so that the process of exudation is arrested. At the same time, heat is abstracted from the air passing to the lungs through the larynx and trachea; and this acts favourably on the lungs. The ice-treatment of croup is to be regarded as the most rational, preventive and abortive plan, if its application be sufficiently early, energetic, and continued. If it be too late to subdue the formation of the false membrane, ice is of very great value during operation and in the after-treatment. The intense cold causes contraction and emptying of the vessels of the neck, so that hemorrhage gives less trouble during the operation, and the larger veins and the front of the neck are less contracted. In the after-treatment, the use of ice diminished the tendency of the operation-wound to become diphtheritic; it also expedites healing, and keeps down swelling of the wound. After operation, pieces of gauze soaked in ice-water or laid upon pieces of ice are placed over the canula and wound and renewed every five or ten minutes. In this way the inspired air is cooled.—*Canada Med. Record.*

Monthly Summary.

Aneurism Treated with Tan Poultices.

In the London *Medical Times and Gazette*, November 4th, Dr. W. Arding writes:—

As the medical treatment of aneurism, has only partially, if at all, engaged the attention of medical practitioners, I beg to bring to your notice a case of such disease treated by me some years ago.

The patient, J. S., of middle age, was affected with difficulty of breathing, particularly when at his work as a shoemaker, and at the same time was affected with a pulsating tumor in the epigastric region, at the scorbiculus cordis, quite evident to the sight. His general health was good in all other respects. After applying some topical remedies without any improvement, at last I suggested the application of tan poultices to the pit of the stomach. In a few weeks the disease apparently was perfectly cured, but I lost sight of my patient, he having left this town for Reading, since which time no further accounts have been received of him.

The *rationale* of the treatment must appear, I am happy to say, evident to every one; an astringent application, externally applied, having successfully produced a deposition of fibrin internally in the diseased artery, so as to almost astonish me with its favorable result.

A Simple Means of Lessening the Pain Attending Blister.

The practice of blistering in the treatment of acute articular rheumatism would meet with much more favor in this country if pain and, in certain cases, strangury and slight hæmaturia were not inherent to this mode of treatment. A hypodermic injection of morphia relieves the pain, but has no effect upon the urinary troubles. To alleviate the one and prevent the other, M. Ernest Besnier proposes the following plan. Take care that the blister is applied in the early morning; those convenient ones which are covered with a sheet of oiled tissue paper will cause very little suffering, and never give rise to those vesicatory or renal troubles which are now and then so severe and painful, provided the blister be removed after a few hours, five to ten at the outside, as soon as the epidermis begins to rise slightly and partly, which we may recognize by the skin becoming pearly and irritated. The plaster must then be removed (a very few hours application is sufficient for a child or a thin-skinned person), and its place must be supplied by a piece of blotting paper very thickly coated with cerate or cold cream. The vesication continues almost painlessly, and the blisters rise nearly as well as if the cantharides had been kept applied. The practitioner who does not disdain to attend to such minute details will gain the thanks of his patient, and more especially of those who have been previously treated by such inhuman proceedings as are common where blistering is employed.—*London Med. Record.*

The Production of Albuminuria.

In an article in the *Transactions* of the Medical Society of King's country, N. Y:, Dr. W. H. Martin observes that the diseases which are now known to be attended by albuminuria are so numerous and pathologically so distinct, that we are puzzled in the endeavor to make analogy and comparison useful in testing the causative influence of pregnancy. It is hard to believe, for instance, that the conditions under which albuminuria is produced by valvular disease of the heart on one hand, and by diphtheria on the other, are identical, or even similar. That scarlatinal poison and that pregnancy both cause albuminuria is proved; but that both cause it by originating exactly the same kind of disturbance eludes demonstration. It is rather a "begging of the question" to assert that each produces changes in the blood, and that it is useless to seek beyond these wholly indeterminable changes for a mode of causation. It is easier to suppose that each disease or group of disease (if they can be grouped etiologically or otherwise) has a peculiar power, and exerts it in a pecular way, than it is to suppose the existence of some one essential condition to which all equally give rise; that is, one single and immediate cause of albuminuria.—*Buffalo Med. and Surg. Journ.*

A Lost Art in Surgery.

[By A. B. Crosby. M. D., New York.]

But if this lost art of cleanliness is to be restored, how is it to be accomplished? The moral accountability for the disastrous results likely to follow the want of cleanly precautions in wards, seems to me to rest on the surgeon himself. It is for him, reverently realizing the functions of his high office, to point out the way. To accomplish the desired end, the exact duties in this regard, of surgeons, internes and nurses should be definitely enjoined. The surgeon should then hold his interne to a rigid daily accountability, and he in turn should narrowly watch the nurses. All causes for complaint of neglected duties to be instantly reported to the surgeon, and if not within his province to correct, to be reported

by him to the hospital authorities. These details have seemed to me so absolutely essential, that I think they should be printed on cards which should be nailed on every door in the wards, and a copy furnished to every attendant connected with the ward for his instruction and guidance. As, however the sum of these regulations has been expressed, I shall not weary the Society with them, simply adding that I have divided them into four sections.

First.—Regulations to be observed by all persons in common having any official connection with the ward.

Second.—Regulations for the guidance of internes.

Third.—Regulations for the guidance of nurses.

Fourth.—Regulations with reference to general cleanliness, designed for the head of the hospital.

And so finally we have reaffirmed the adage that "cleanliness is next to Godliness," and this, too, in the largest and best sense is *health*. *Buffalo Med. and Surg. Journ.*

Health of Cities.

The public health of some of our cities was not in such a satisfactory condition during March as it was in February, if we may judge by the death-rates; the inclement weather of March was probably one important factor in producing an increased mortality.

In New York, the deaths were mostly caused by phthisis, pneumonia, and bronchitis; diphtheria and croup were more fatal than in February; scarlatina has steadily diminished since January.

In Philadelphia, the chief causes of death were phthisis, pneumonia, bronchitis, diphtheria, small-pox, croup, typhoid fever, scarlatina,—all of them more fatal than in February.

In Brooklyn, the mortality from the seven chief zymotic diseases, was nearly the same as in February. Diphtheria and croup have increased considerably. Scarlatina is less. The relative order of prevalent diseases is as follows: phthisis, diphtheria (and croup), pneumonia, scarlatina, bronchitis.

In Chicago, scarlatina heads the list but is declining.

In Boston, scarlatina remains very near the low place in the list which it reached in February.

In Providence, the death-rate for the month was only 16.3 per 1000 of Population. The mortality was chiefly from diseases of the respiratory system. Diphtheria was also more fatal than in February.

In Massachusetts cities other than Boston, phthisis, diphtheria (and croup), and pneumonia were the chief causes of death. Scarlatina has subsided.—*Buffalo Med. and Surg. Journ.*

Acute Yellow Atrophy of the Liver.

Dr. Daly has contributed the report of a case of acute yellow atrophy of the liver, which is specially interesting in connection with the theory that one function of the liver is to destroy poisonous matters in the system. He was called to see a married woman of thirty-eight, who had six children, the youngest of which she was then nursing. Suffering from jaundice, she had been for some days under medical treatment. The tongue was coated, pulse 90, and temperature 99.2° F. There was loss of appetite; the bowels were constipated; the stools pale, but not white; the urine full of bile; the skin and conjunctiva a slightly yellow. No pain was felt anywhere. The case was held to be one of catarrhal jaundice, and was so treated for four days, when suddenly delirium set in, with muscular twitchings; urine and fæces were passed involuntarily; the pulse was 140, and the temperature 104.6° F.; the gums were covered with sores, and the breath had an abominable odor. Acute yellow atrophy was suspected, but as yet there had been no decrease in liver dullness. The following morning (the fifth day of attendance) the area of dullness had decreased remarkably, and in the evening the percussion sound was perfectly clear over the entire hepatic region. The patient died during the night. The cause of the disease was ascribed by the family to drinking impure cistern water, an opinion in which the physicians and Dr. Murchison agreed. Several others of the family were also sick at the same time, and one of the children, a girl of seven, had jaundice, but she recovered after brisk purging. Possibly she escaped acute yellow atrophy because, according to Niemeyer, children do not have it. *Lancet.*—*Medical Record.*

Subcutaneous Injection of Ether in Collapse.

(*Jl. de Med. et de Chir. Prat.* March 1877. *Lon. Med. Record*, April 15, 1877).—M. Vermeuil at La Piete, has employed with success in several cases of collapse, the sub-cutaneous injection of ether. With regard to the method of using it, M. Vermeuil advises the surgeon to go about it with the thermometer in one hand and syringe in the other. He might commence by giving fifteen drops, and repeat it in an hour, taking care to ascertain the temperature. If this be not sufficient, the injection may be made as many times as is necessary, the ether being apparently well borne.—*Det. Med. Jour.*

The Treatment of Diarrhœa in Hot Countries by the Sugar of Milk.

(*New Remedies.*) Dr. Talmy prescribes for the diarrhœa of hot countries, from 20 to 300 grammes of suger of milk daily. He administers it in the simplest way—the sugar, dissolved in a little water, or as a draught in the course of the day. An excellent mode of administration consists in putting the dose of milk to be taken into half a litre or two litres of milk, according to the habits and the digestive capacities of the patient. The treatment is spread over several months, diminishing the dose as nutrition becomes more considerable and easier. According to M. Talmy's little wark (published by Coccoz, Paris), the endemic diarrhœa of hot climates is the result of a functional lesion of the liver, which results in the diminution and even the suppression of the glycogenic function of the liver. The sugar of milk may thus replace the glucose which is wanting in the blood.

A Caution in Regard to Salicylic Acid.

Mr. Blandeau, of Paris, states that, according to dentists, this agent has injurious effects on the teeth. English observers have noticed its effect on the bones, and necrosis of the tibia has been assigned to its use. It evidently possesses considerable affinity for the calcareous salts of bone, as we see the urine loaded with lime salts in an ultra-physiological proportion, from the internal use of the acid. The salicylate of soda presents the same dangers. If these facts are confirmed, the therapeutical employment of salicylic preparations should be condemned.—*St. Louis Electic Med. Journal.*

Oxide of Zinc in Obstinate Diarrhœa.

Dr. Bonamy, of Nantes, relates in the *Bull. de Therap.*, some cases confirmatory of the great and speedy utility of oxide of zinc in obstinate diarrhœa that has resisted various other remedies He employs the formula recommended by Prof. Gubler, who first used the remedy for this purpose, viz: three grammes and a half (fifty-three grains) of the oxide, combined with half a gramme (eight grains) of bi-carbonate of soda, and divided into three or four doses, one to be taken every three hours. The addition of the soda prevents the production of vomiting by the zinc.—*St. Louis Electic Medical Journal.*

The plague has broken out at Bagdad, and is rapidly extending there. It is the opinion of competent observers that there is a strong probability of its extending its ravages the present season. The Turco-Russian war adds a new element of danger, and it is possible that Europe is again to suffer as it did during the middle ages. The most energetic sanitary precautions should be used to prevent its migration westward.—*St. Louis Electic Med. Jour.*

Benzoic Acid in Chronic Cystitis.

Dr. Mulhorn, reported, before the late meeting of the Wayne County Medical Society, Michigan, that he had a lady patient who had suffered from cystitis for three years. There was frequent desire to urinate, but ten-grain doses of benzoic acid very promptly relieved this difficulty. He has found benzoic acid to work like a charm in cystitis.—*St. Louis Electic Medical Journal.*

Cream for Infants.

At the last meeting of the Baltimore Homœopathic Medical Society, Dr. Clift asked for the best remedy for Constipation of Infants, saying that he had a case in which he had given all the usual remedies without success. Dr M. Brewer who has charge of the Baltimore Catholic Foundling Asylum, advised him to give plenty of cream diluted with an equal quantity of water.—*American Observer.* E. C. P.

Vaccination on the Leg.

(*Louisville Medical News*). Dr. Desert has written quite a long letter for the *Mouvement Medical*, recommending the practice of introducing the vaccine virus into some part of the lower extremity, especially where the individual is of the female sex, for in scrofulous persons the cicatrix is often very unsightly, and the arm has no advantage over the leg as a *lieu d' election*.

Salicine for Chills

Dr. Thompson reports, in *British Medical Journal*, a number of cases showing the superior efficacy of salicine in the treatment of intermittents. Cases wherein quinine had utterly failed were promptly relieved with this agent. He used large doses, grs. xxx every two hours. Usually the fourth dose was sufficient to break up the chain of morbid action, after which a few doses at longer intervals completed the cure. It may be given when the chill is on, and will usually shorten the chill, and greatly mitigate or even arrest the febrile exacerbation.—*South. Med. Record.*

Absorption of Mercurials.

(*Prager Med. Wochensch. Cin. Clinic*, April 7, 1877.)—Dr. Hamburger, from a series of experiments and very careful examinations, draws the following conclusions:

1. In order to affect the milk, mercury must be given in the form of suppositories.

2. Mercury used by inunction never affects the milk, but always is found in the urine and fæces.

3. The excretion of mercury takes place principally through the bile.—*Detroit Med. Journ.*

Personal Disinfection of Physicians.

Dr. Seaton, medical officer of Health, remarks in a late lecture:—There are many occasions where the clothes of the medical attendants require disinfection, as for instance, after visiting a group of small-pox or scarlet fever patients. Where the practitioner has been unfortunate enough to have a patient with puerperal fever under his care, the linen requires to be boiled, and the other things baked, before being worn again at a labor. But it is to the hands that he must pay special attention, and it is here that the disinfecting properties of chlorine are particularly useful. The hands should be well soaked three or four times daily, in the chlorinated soda (P. B.). If this is done for a week, baths used at the same time frequently, and the clothes disinfected, practice may be resumed without danger. Length of absence will not compensate for a neglect of these precautions, as the practitioner may communicate the disease after many months.—*Med. and Surg. Reporter.*

External Use of Chloral Hydrate.

A writer in the *Canada Medical Record* recommends a solution of chloral hydrate in water, from three to five grains to the ounce, as a substitute for carbolic acid for external use. Its effect on ulcers is prompt and admirable, and a case of eczema was successfully treated by it. In cases of amputation, where the surfaces took on unhealthy action, the solution changed their character and removed the difficulty in twenty-four hours. It removes fetor, is clean and neat, does not stain, and stimulates granulations without destroying them.

Chloral hydrate has also been used in Germany as an antiseptic application in cancer of the uterus. A strong solution—one part to twelve of water—is applied by means of cotton. Dr. Goodell, of Philadelphia, also speaks highly of it as a purifying and deodorizing agent. *Drug. Cir. and Chem. Gazette.*

Guarana in Migraine.

A correspondent writes to the British Medical Journal: Having used guarana in a great many cases, I have come to the following conclusions: 1 True migraine, characterized by acute frontal pain, commencing on one side, occasionally both, or going from one side to the other, usually lasting from twenty-four to forty-eight hours, with or without sickness, and relieved or cured by sleep, whether caused by errors in diet or not, will almost invariably yield to it.

2. In young persons, in whom the habit is only commencing, not only does it cure each individual attack, but, by persevering, the habit itself is broken.

3. One cause of failure is the smallness of dose, so that, in many cases in which it has been tried before and failed, an increase of the dose has been followed by cure. Twenty-five grains of the powder is my usual dose for an adult female, half a drachm for a man; less, of course, for younger cases, repeating in one or two hours, if necessary.—*Louis. Med. News.*

Extirpation of the Kidneys.

Mr. Jessop, of the Leeds Infirmary, lately extirpated the left kidney of a child aged two years and three months, for malignant disease of that organ. The incision was similar to the recommended for colotomy, but longer. When the diseased mass was reached the kidney was peeled by means of the fingers, and a whipcord was passed around the vessels and firmly tied. The remainder of the growth was afterwards tripped away and the whipcord left to drain the wound. The operation was a formidable one, owing to the large size of the diseased organ, and the free venous hemorrhage which followed the separation of the growth from the surrounding structures. When removed the kidney weighed sixteen ounces, and resembled encephaloid in appearence. In five days patient was doing well.—*Louis. Med. Journ.*

Lacto-Phosphate of Lime as a Tooth-Filling.

The treatment of exposed dental pulps and sensitive dentine is the subject of a paper by Junius E. Cravens, D. D. S. The lacto phosphate of lime is applied to the exposed pulp, which is carefully sealed and left undisturbed for several weeks. On removing the coverings a new bone is found, its surface continuous with that of the formerly soft dentine, and the sensibility being even below the normal degree. Oxychloride of zinc and other substances, however, may produce like results.—*Drug. Cir. and Chem. Gazette.*

Poisoning with Salicylate of Soda.

Dr. F. Petersen relates some unusual symptoms of poisoning with salicylate of soda. In six hours a patient took six drachms. Besides intense headache, tinnitus aurium, weakness of vision and profuse diaphoresis, there appeared disturbance of the sensorium with troubled hallucinations, mydriasis, strabismus divergens, hoarseness and difficulty of speech so that many words could not be pronounced at all.

These symptoms disappeared after some days but returned, though with less intensity, after subcutaneous injection of one-third of a grain of salicylic acid.

Dr. P., recommends subcutaneous injection of from eight to sixteen grains of salicylic acid in concentrated solution for erysipelas. The injections must be made under the healthy skin near the affected part.—*Maryland Med. Journ.*

How to Keep Cool of Hot Nights.

The first condition being a good bed ; a wet towel hung up in the open window is a most effectual means. And when there are bad odors or miasmas afloat in the street or neighborhood, a by no means uncommon condition of city denizens, to each gallon of water used for wetting the towel add half a pint of Tilden & Co.'s Bromo-Chloralum. For the sick room especially—and, above all, in febrile and contagious diseases—the use of Bromo-Chloralum in this way is of very great importance. In such cases it should be used in about one part to eight of water, and freely sprinkled about the bed and apartment, as well as evaporated from wet towels. It is both odorless and stainless. —*The Sanitarian.*

Chloral Cream.

An agreeable mode of administering chloral is that practised in France, and called "chloral cream." Take powdered sugar 100 parts, chloral hydrate 5 parts, water 15 parts; dessolve the chloral in the water, into which triturate the sugar. Flaver with essence of peppermint.—*Southern Medical Record.*

Chloroform Emulsion.

Chloroform may be made into an emulsion by agitating it with one hundred times its quantity of milk. It remains permanently suspended and is, perhaps, the most agreeable form for the internal administration of the remedy. *Southern Medical Record.*

Tasteless Tincture of Chloride of Iron.

The following formula is given in July number of *New Remedies* for a tasteless tincture of the chloride of iron:

℞ Solution of Chloride of Iron, U. S. P. 1 oz.
Citric Acid.....544 grs.
Sodium Carbonate...1,000 grs. or qs.
Water, distilled.....1 oz.
Alcohol.....q. s.

Dissolve the citric acid in the distilled water, and heat to the boiling point, gradually add the sodium carbonate until the acid is saturated. Mix this with the iron solution, which will now assume a beautiful green color, and make up the measure to 4 oz. with alcohol.—*Detroit Medical Journal.*

Hysteria.

The following formulæ (Naphey) will be found valuable in hysterical affections:

℞ Tinct. assafœtidæ.....dr. ij.
Ammonii carbonatis.....gr. xx.
Aquæ camphoræ.....oz. iv. M.
One tablespoonful occasionally.

℞ Tinct. assafœtidæ.....dr. ij.
Spiritus ammoniæ aromat.....dr. iij.
Tinct. valerian.....oz. j M.
One teaspoonful in a wine glass of water every two or three hours.

℞ Tinct. castorei.....dr. iij.
Spiritus lavend. comp.....dr. vi.
Aquæ camph.....oz vj. M.
A tablespoonful three times a day, when cerebral symptoms and hysterical phenomena are marked.—*Southern Medical Record.*

Arrowroot Jelley.

Arrowroot, Bermuda...2 heaping teaspoonfuls.
White Sugar.....2 teaspoonfuls.
Lemon Juice.....1 teaspoonful.
Water, boilling.....2 quarts.

Wet the arrowroot in a little cold water, and rub smooth. Then stir it into the pot, which should be over the fire actually boiling at the time, with the sugar already added. Stir until clear, boiling steadily all the while, add the lemon. Pour into a cup, or form, previously wet in could water.—*Southern Med. Record.*

For Baldness and Falling of Hair.

℞ Acetic acid.....dr. i.
Cologne.....oz. i.
Kerosene oil.....oz. iij. M.
S. Rub scalp morning and night with it.—*Southern Medical Record.*

In Pruritus Pudendi, Scroti, Etc.

℞ Hydrarg. bichlorid.....gr.xv;
Alcohol.....q. s.;
Aq. destil.....fl ʒ iv. M.

A teaspoonful to be added to a glass of water, and the affected parts bathed with the lotion several times a day.

℞ Chloral hydrat.....gr.xv;
Glycerine.....fl. ʒ vss;
Aq. destil.....fl. ʒ vij; M.

℞ Sulphuris.....gr. lxxx;
Emuls. amygdal.....fl ℥ viij;

℞ Hydrarg bichlor.....
Ammon. hydrochlor.....
} aa gr. iv;
Emuls. amygdal.....fl. ℥ viij. M.

℞ Sulphuris.....ʒ j;
Gum. acaciæ.....gr. lxxx;
Ol. amygdal. dulc.....fl. ʒ ij;
Aq. lauro-cerasi.....fl. ʒ ijss;
Syrupi simp.....fl. ʒ vii. M.

One or another of these lotions may be applied night or morning.—*Louis. Med. News.*

Cough Mixture in Phthisis.

℞ Mist. amygdal dulc.....ʒ iij;
Fl. ext. glycrrh.....ʒ viij;
Mucil. acaciæ.....ʒ viij;
Potassi cyanidi.....gr.ij;
Acidi citrici.....ʒ j;
Morphiæ acet.....gr. iij;
Spts. nitrosi ether.....ʒ vij;
Syr. sanguin. canad.....ʒ iij;
Ext. prunus virg., g. s. ad.....℥ viij;

Sig. Dessertspoonful every three or four hours.

I find this generally moderates the cough, exerts a very beneficial influence on the bronchial mucous membrane, and improves rather than deteriorates the digestive function.—*Ibid.*

For Eczema.

℞ Elixir Iodo.....oz. viij.

Take a teaspoonful in water four times a day.

℞ Tinc. Benzoin.....oz. i.

Apply with brush night and morning. With this treatment we have succeeded in effecting a cure of one case which had become chronic, and had resisted all medication, covering a period of several years.—*Southern Med. Record.*

For Gonorrhœa.

℞ Cannabis indica tinct....
Tinct. gelseminum.....
Oil sandal-wood (yellow)
Oil erigeron.....
} aa oz. ss.
Simple syrup.....oz. ij. M.

S. Teaspoonful three times a day. G. *Southern Medical Record.*

Dysentery.

The following will be found an excellent formula for dysentery:

℞ Sulphate soda..
Bitartrate potas
} aa d. ss to dr. iss.
Sulph. morphia. gr. ss to gr. ij or iv.
Tinc. gelseminum.....dr. ss to dr. j.
Syrup ginger.....
Water.....
} aa oz. ij. M.

S. Teaspoonful every hour.

The smaller proportions for a child one year of age. The larger for adults. Shake well before using.—*Southern Medical Record.*

Aromatic Syrup of Galls.

℞ Pulv. gallæ optimi.....dr.ss.
Pulv. cinnamomi.....dr.ij.
Pulv. zingiberis.....dr.ss.
Spiritus vini gallici optimi..Oss.

Let the ingredients stand in a warm place for two hours, and then burn off the brandy, holding some lumps of sugar in the flames. Strain carefully. Dose fifteen to forty drops every three or four hours. A pleasant astringent suited to delicate stomachs. (Naphey.) *Southern Medical Record.*

Prof. Dowell's Ague Pill.

The following is the formula for Professor Dowell's (Galveston College) favorite pill for intermittent fever:

℞ Quiniæ sulph.....gr.xx.
Ferri et quiniæ citratis....gr.xxx.
Ext. gentianæ.....gr.x.
Ext. hyoscyami.....gr.xij. M.

Make twelve pills. Give one every hour until six are taken.

For Nervous Debility.

℞ Acid phos. dilut.....oz.ss.
Calisayæ elix.....oz.ij.
Elix. valerian ammon.....oz.j.
Glycerinæ.....oz.iss.
Vini Xerici.....ox.iij. M.

Tablespoontul three times per day.—*Southern Medical Record.*

For After-Pains.

℞ Sulph. morphiæ.....gr.i.
Bromide potass.....gr.i.
Pulv. camphor.....
Caulophyillin.....
} aa gr. viij. M.

Make eight powders.

S. One powder every hour or two until relieved.—*Southern Medical Record.*

EDITORIAL.

Death of Prof. A. B. CROSBY.

As we are going to press the New York papers of Aug. 10th, contain the sad announcement of Dr. A. B. CROSBY. It seems but yesterday that we met him at the Windsor Hotel, his residence was near there, he was (to all appearance) in full health. The medical profession has lost a good and able man, and one who will be missed in all the relations of life; his friends have lost a companion they were always happy to meet, and whose turn of mind was to make others happy, which is indeed the true aim and end of life. How few act upon it or appreciate this quality in man.

A despatch from Hanover, N. H., announces the death there, yesterday, of Dr. Alpheus Benning Crosby, Professor of Anatomy in Bellevue College, in this city. A private telegram informs us that he was ill but a week, and that even on Tuesday last he was able to be out of doors, his death, from lesion of the brain, being very sudden and unexpected. Dr. Crosby was the second son of the late Dr. Dixi Crosby, for many years the leading professor in the medical department of Dartmouth College and one of the most eminent practitioners and medical authors of New England. Dr. A. B. Crosby was born in Gilmanton, N. H., in February, 1832. He graduated in both the Academic and Medical departments of Dartmouth College, and afterwards held a professorship in the latter department—as also, at the same time, a chair in the Medical Department of the University of Vermont at Burlington. In 1871 he accepted a professorship in the Long Island Medical College, and afterwares the chair of Anatomy in Bellevue, also occasionally lecturing at Dartmouth and Burlington. He has been accustomed to spend his summers at the homestead in Hanover, and his family were with him at the last. While surgeon of one of the New Hampshire regiments during the late war, he met his wife, Miss Mildred Smith, of Virginia, who, with three children, survives him. Dr. Crosby, in the few years of his residence here, had attained a prominent place in his profession. During the past winter his public lectures, which were fully reported in THE WORLD, attracted much attention, and were widely discussed in the columns of the lay as well as of the professional press. He was of a family noted in New England. His uncle was the Greek scholar and grammarian, Professor Alpheus Crosby. His father, as we have said, was long at the head of his profession in New Hampshire, and his brother, Dr. Alfred Crosby, of Concord, has succeeded to the place made vacant by his father's death. The funeral services will be held at Hanover, and will be participated in by the Faculty of Dartmouth.—*N. Y. World.*

Dr. A. B. CROSBY, whose sudden death has been announced, was noted among the medical profession in this city as one of their best lecturers, and as perhaps their very best after-dinner speaker. One who knew him well once described him admirably, by saying that all sides of him were as ripe and rich as the sunny side of a peach. He was full of wit and anecdote, and withal was a man of such genuine and thorough kindliness of heart as to be universally endeared even to those who only knew him professionally. He succeeded his father, the noted Dr. Dixi Crosby, as professor of Surgery and Anatomy in Dartmouth College. Of late years he has been also Professor of Anatomy in Bellevue. He was a man of wide and scholarly tastes outside his profession and for a comparatively young physician was perhaps the most prominent in Vermont and New Hampshire. He has always kept up his Summer residence at Hanover, N. H., and has in this way been able to continue his lectures in the medical college there after his connection with Bellevue. He died in his father's house, and his venerable mother stood by to close his eyes.—*N Y. Tribune.*

EXPRESSIONS OF REGRET BY THE MEDICAL FACULTY OF DARTMOUTH COLLEGE—ARRANGEMENTS FOR THE FUNERAL—RESULT OF THE AUTOPSY.

Since the death of Dr. Crosby lectures and studies have been suspended till Monday next. The following highly appropriate resolutions were drawn to-day by a committee on behalf of the Medical Department of Dartmouth College:—

Whereas the sudden and afflictive dispensation of Providence has removed from us Dr. A. B. Crosby, of our faculty of instruction.

Resolved, That we desire to express our sincere sorrow and our sense of personal loss of an instructor so gifted, learned and apt to teach, and of a friend and counsellor, genial, wise and faithful.

Resolved, That we offer our heartfelt sympathy to the bereaved family and friends, with the earnest wish that in the memories of his noble life in their confidence in his blessed immortality, in their faith in the God in whom he trusted, they may find comfort in this bitter hour.

WILLIAM L. SMITH,
THOMAS A. EMERY DEBLOISE,
GEORGE T. ADAMS,
} Committee.

ARRANGEMENTS FOR THE FUNERAL.

The order of the funeral procession will be as follows:—Medical Department under Lieutenant Thomas A. E. Debloise, United States Navy, Marshal. The medical class will form in front of the medical building at twenty minutes past two P. M. Sunday, whence they will proceed to the residence of the deceased. They will escort the remains to St. Thomas Church, in which Episcopal funeral services will be held, Rev. W. D. Dawson, rector, officiating, assisted by Rev. Dr. Daniel Noyes and Rev. Professor H. E. Parker, of the Dartmouth faculty. Large delegations of prominent gentlemen from the State medical societies have already arrived, from whom will be selected the pall and under bearers. The remains will be deposited in the college churchyard in the family lot, in which are buried remains of two of the most eminent of New Hampshire physicians, Dr. Asa Crosby, grandfather, and Dr. Dixi Crosby, father of the deceased.

The autopsy held on the late Dr. A. B. Crosby revealed extensive degeneration of the kidneys, confirming the diagnosis diabetes melitus. The examination was conducted by Drs. Frost and Peaslee.—*N. Y. Herald.*

For the Journal of Materia Medica.

A Case of Uterine Hemorrhage.

BY S. C. ROSS, M. D.

On Wednesday morning, Nov. 10th, 1875, I was called to see a lady who was in the sixth month of her pregnancy, and had been seized with uterine hemorrhage. Some few weeks previous, (she thought) she had been suddenly attacked with hemorrhage for a short time and lost a small quantity of blood, when the hemorrhage ceased and returned on the morning named, preceded by a dull pain. On examination I found the blood flowing profusely, and the os uteri so high up as scarcely to be reached, and the orifice so little dilated as not to admit more than the point of the middle finger, with which the placenta was felt adhering round the cervix. I administered Acetate of Lead 3 ss in water every four hours and plugged the vagina with cotton-wool, forcing it well up to the os, and waited; on removing the plug some hours after, I found that the hemorrhage had been restrained and continued the acetate &c., and requested consultation with Dr. Atkinson of Dover, who was sent for and came about 4 P. M. After making examination, he agreed in my diagnosis and treatment and recommended my watching the case closely, and if I needed assistance to send at any time. On Sunday evening at nine o'clock P. M. hemorrhage again commenced and was not restrained by the introduction of a plug or cold water over the hypogastrium. I sent for Dr. A., who passed the hand into the vagina and in the course of half an hour he succeeded with one of his fingers in reaching the membranes and restoring them. The head of the child presented very large and hard. Ergot was given, cold cloths applied and a binder firmly drawn around the abdomen. Uterine contraction commenced, and we hoped the head would be expelled, without the employment of any other artificial means, but hemorrhage again became profuse, stimulants were given without effect, and at 8.30 o'clock we resolved to complete delivery by craniotomy.

The right hand was introduced and forced through the os uteri, the Perforator passed up, the head opened, the bones broken up and after half an hour of anxiety the head and trunk were extracted with forceps, the placenta came away with some little artificial assistance, cold cloths were applied and the hemorrhage had entirely ceased at 7 A. M. The subsequent treatment consisted of Iron, Quinine and Pepsine every 12 hours and the 12th day I put her on Port wine; she is now attending to her usual duties, having fully recovered.

S. C. Ross, M. D.

Bromo-Chloralum in Erysipelas, Chronic Gastritis, &c.

Aurora, Beaufort Co., N. C., July 23rd, 1877.

Messrs. Tilden & Co.:

Gents.—I have been waiting two or three years to see if any of my professional brethren would notice a great virtue in Bromo-Chloralum, which I have seen no where claimed for it and I think it due to you, in view of your great and uniform kindness to me, also to the profession and a suffering public, that I delay no longer. Bromo-Chloralum has proved to be a powerful antiphlogistic, in my hands, topically applied. It relieves almost instantly the unpleasantness attending the bite and sting of a vanity of insects, such as the Mosquito, Bee, Spider, &c. &c. &c.

Several cases of erysipelas have yielded readily; this suggested the trial of it in Burns; accordingly I have tried it in recent ones by bathing the part (one part to five or ten of water) and then wrapping a a cloth, saturated with it around, or laid upon the burned part—The pain is relieved almost instantly, nor have I seen a blister formed under it, nor has there been any further trouble with it. This has been my experience in every case in old, suppurating burns attended with much soreness and pain; these are speedily allayed, a healthy condition assumed and an almost painless cure commenced at once and was surprisingly soon accomplished.

Such being the fact, the question occurred to me, why then, may it not act similarly in internal inflammation. Accordingly, *I tried it in an old case of chronic gastritis*, that had (by others) been given up

as hopeless. The neighborhood was soon astonished to see the nearly bedridden skeleton walking forth in full healthful flesh. *A* trial in a much more recent case resulted in a cure; of course some other remedies were occasionally used, such as a cathartic, anodyne and simple tonic, but the Bromo-Chloralum was the agent. If a good *external* disinfectant, why not *internal*, also (being non-poisonous); so I have used it with very great advantage in the flatulence accompanying, or resulting from, a severe but temporary attack of indigestion. With a little help will it not cure Dysentery; and prevent the terrible intestinal inflammation of Typhoid Fever? What further experience may develope, I know not, but this I know, Bromo-Chloralum is a priceless boon to the human family. Very truly, ROSCOE HOOKER, A. M., M. D.

We have seen Bromo tried with the most excellent results in ulceration of the bowels, irritation and ulceration in Typhoid fever, and also in cancerous difficulties of the stomach.

It will arrest fermentation and a few drops taken after eating will prevent putrefaction of food, and consequent generation of gas. We have tried it with success in such cases. ED.

Bromo-Chloralum in Small-Pox.

OAKLAND, CAL., July 10, 1877.

Messrs. TILDEN & Co.:

Gentlemen—It is with pleasure I notice that in the last number of your valuable journal, you again direct the attention of the profession to Bromo-Chloralum; for I fear that prophylactic remedies are too sparingly and too seldom used.

Though you have claimed almost incredible power for the Bromo, the abundance of testimonials, and the eminent source from which they come, show that others have realized all or even more than you had asked them to expect.

After using it for a number of years I am glad to inform you that my trials have been attended with very happy results.

Early in April I was summoned to attend a case of Variola. The patient was of a plethoric habit, a free liver and much fatigued from a long journey. His case proved to be of the confluent variety. He lived fourteen days, and for the last four or five days was loathsome to behold; yet the odor peculiar to the disease was not perceptible, as the room was kept scrupulously clean, and Bromo *freely* used, your directions being carefully observed.

On my first visit, I re-vaccinated wife and sister, and vaccinated his child. It only took on the last named. Although the two first named were in the room during the day, and part of the night, and the child continued to nurse, they all escaped. Others less exposed escaped.

I now more firmly believe than ever, that an ounce of prevention is worth a pound of cure. I vaccinated several with the scab from the child's arm, but as I expected it failed to take for the child had been bathed daily in a weak solution of the Bromo. Yours truly,

R. D. MAUBY, M. D.

N. B.—The new style of the Journal has greatly improved it.

Extract from letter of J, C. MUNDAY, M. D.

Lake Charles, La. Aug. 5, 1877.

"I find the" Journal of Materia Medica" an indispensable *Vade Mecum* of Medical Literature; one that I do not intend to be without under any circumstances whatever. I am using,the Elixir Iodo, and Bromo-Chloralum externally, in my practice and find the more I prescribe them the more I am induced to do so from the good effects obtained in each and every case. I regard the Iodo as the most positive and sure alterative ever brought to the notice of the profesion, not only in cases of a scrofulous diathesis, but in all blood impurities and impoverishment, hepatic congestion and chronic Malarial Toxæmia. In diphtheria, sore throat and scarlet fever, as a local application I want nothing more positive and certain in its speedy action, than the Bromo-Chloralum, and as a disinfectant and deodorising agent it really supersedes any thing I have ever tried."

Firwein and Elixir Iodo in Sequelæ of Measles.

HART, Mich., July 3d, 1877.

Messrs. TILDEN & Co.:

Gents—According to promise I send you a more detailed account of the case of Miss T.:

Miss T. aged 18, sanguine nervous temperament, rather inclined to obesity than otherwise, was about a year ago attacked with the measles, and whether due to imperfect treatment or not, the *sequela* was terrible. At this time she was living in a more southern part of the state. All attempts on the part of the physicians of the place seemed to be in vain, for she gradually declined in health until she moved to this place. She came under my treatment in the early part of the past winter. I found her laboring under intense congestion of the posterior nares, fauces and bronchial tubes, attended by an excessive secretion from the bronchial mucous membrane of the left lung, and probably some tuberculous deposit. She expectorated at least two pints of tenacious mucus in the twenty-four hours, and occasionally cheese-like particles resembling softened tubercle; was very much emaciated, pulse weak and one hundred and twenty per

minute, with temperature above the normal standard. She had had no appearance of her menses for nearly a year. I prescribed Cod-liver Oil and Whisky, with the Syrup of Iodide of Iron. Stimulated the posterior nares, fauces, &c., with a solution of nitrate of silver every few days, and ordered Bromo-Chloralum in a saturated solution of Chlorate of Potash, to be inhaled and used as a gargle. Under this treatment she made some improvement in her general symptoms, but the local symptoms appeared about the same, and her harrassing cough and expectorations continued with but little change.

Reading in your valuable Journal of the wonderful results attending the use of 'Firwein,' I determined to procure some for her, I laid aside the Syrup of Iron and put her on the use of the Firwein and Elixir Iodo, &c. Before she had taken a bottle of each her improvement was more decided, and she continued the use of those preparations, part of the time with Cod-Liver Oil, until her cough has almost entirely gone, her expectoration healthy, her menses have become regular, her appetite and digestion good, her voice improved, indeed, she, seems to be on the high road to perfect health. For the last month I deemed it not necessary for her to continue the treatment any longer. She is simply using a little cyanide of potassium and pyrophosphate of iron. The very remarkable change in her condition is certainly due to the Elixir Iodo and Firwein. Yours, &c.,

M. R. CHADWICK, M .D.

Firwein.

A. M. PETT, ESQ.;

It is now two years since I bought Firwein, which was used in a case of Asthmatic-like Bronchial Catarrh Affection, by Dr. Allen, with good success, and it has become to be used in most affections of the throat and lungs, and is now the most saleable remedy I have in my store for the afflicted.

HENRY F. KINFURST,

West Liberty, Mo., July 30, 1877.

Elixir Iodo in Liver Complaint.

Extract from letter of Rev. W. H. STOCKTON, St. Peter's Rectory, Phœnixville, Penn.

"Please send me half dozen bottles of Elixir Iodo, I find that it proves a great help to me and my Liver Complaint, keeping my bowels regular."

Fluid Extract of Ergot.

S. P. WISE, M. D., Millersburg, Ohio, July 10, 1877.

"I have been using your "Fluid Ext. Ergot Formula of 1874," and consider it to be the most reliable preparation offered to the profession.

Your Firwein has also proved a valuable remedy in my hands."

Extract from letter of E. W. SPAFFORD, M. D., Portlandville, Otsego Co., N. Y.

"I have for several years past used your preparations, and desire particularly to specify your Fluid Ext. Ergot, the Elixir Iodo-Bromide Calcium Comp., and Bromo-Chloralum, as most efficient therapeutical agents in the wide diversity of cases to which they are applicable."

From B. E. KENDIG, M. D.

Salunga, Lancaster Co., Pa.

Enclosed you will find the price of my last years subscription for, Journal of Materia Medica, which I hope will (with my many thanks) remunerate you for the labors bestowed upon your valuable and welcome Journal. The Journal is increasing in popularity quite as rapidly as it does in size and justly too, for it compares well with many of the $5,00 Journals of the day.

Bearsfoot Ointment.

DR. SILAS C. TUMBO, Lead Hill, Boone Co., Ark's, sends us the following Recipe which he commends as being useful in enlarged spleen, and all glandular swellings:

Rad. Polymnia Uvedal. Rec. Cont. 8 oz.
Adipis..... 2 lbs.

M.—Place over a slow fire and keep hot for four hours and then strain through flannel.

The ointment should be used freely three times a day, and the Fluid Extract in conjunction, internally.

EIGHTH ANNUAL MEETING OF THE AMERICAN ASSOCIATION FOR THE CURE OF INEBRIATES.

The *Eighth Annual Meeting* of the *American Association for the Cure* of *Inebriates, to be held at Chicago, Ill., beginning Sept. 12th, at* 10 *A. M.* A large number of papers will be read, and important business transacted.

T. D. CROTHERS, M. D., Secretary,

BINGHAMTON, N. Y., Aug. 8th, 1877.

☞ Correspondents will oblige by writing plainly their *names, Town, County and State.* We are frequently unable to answer letters because these are omitted.

THE
JOURNAL OF MATERIA MEDICA,
A Monthly Journal Devoted to
MATERIA MEDICA, PHARMACY, CHEMISTRY,
AND NEW REMEDIES.

New Series.] September 15, 1877. [Vol. XVI.—No. 9.

Gelseminum Sempervirens—Its Value as a Therapeutic Agent.

BY W. H. ARMSTRONG, M. D., DALLAS, TEXAS.

Read before the Dallas City Medical and Surgical Association, and published in accordance with resolution.

The advance made during the past few years, in some of the branches of medicine, are no less remarkable for their brilliancy than for the rapidity with which they have been performed. In Surgery, in Physiology and in Pathological Anatomy, the progress has been well nigh incredible, and the improvements in practice resulting therefrom, have been of incalculable benefit to the profession and to those committed to their care. But while this is true in reference to these departments of medicine, yet it is beyond dispute that in Therapeutics proper we are but little in advance of the primitive fathers of medicine. We have added, it is true, many remedial agents to the materia medica but while laughing at Rush, and ridiculing Sangrado, possess much less real knowledge of the drugs employed by us, than they did of the potential duplex, the lancet and the mercurial. Every medical man must admit that Therapeutics is by far the most important branch of the art to the practitioner. A correct apprehension of the action of an agent, is certainly pre-requisite to its rational employment. The confession must be made, mortifying though it be, that we know nothing, absolutely, of the modus operandi of a single remedial agent. Having acted so and so in a number of cases, we infer that its subsequent actions will be of similar character. True, we have many nicely constructed theories, which, while they serve to exhibit the ingenuity of the human mind, yet some stubborn fact will occasionally rise to the surface, and demonstrate their worthlessness. Let me be understood—I do not enter a caveat in toto against theory. It is the nature of man to speculate. Give him opportunity, and he will philosophise; his deductions may prove to be absurd, but results of a more or less beneficial character will spring from them. The science of chemistry, now so magnificent in its proportions, had its origin in the wild dreams of the Alchemists, while astronomy, the noblest science of them all, can claim no prouder source than the superstitious astrologers of the East. The mind can only reason from effect to cause, and if empiricism is a chargeable reproach to medicine, the same may be affirmed of any art and science of human invention. While the inductive method is the only one in medicine by which conclusions may be reached, yet we practically ignore this mode of acquiring real information, by the thoughtless combination of remedies, scarcely regarding their chemical compatibility or physiological action upon the enemy; and thus when a case recovers, we hardly know to which drug to attribute the cure. Complexity is the offspring of ignorance, simplicity the result of intelligence. The truth of this assertion finds apt illustration in the former treatment of Peritonitis; calomel and opium were constantly associated, and curative effects attributed to the mercurial, and only anodyne properties to the opiate. Latterly these drugs have been employed separately, demonstrating the great fact that opium is the most valuable antiphlogistic in the materia medica, and that calomel was not only useless, but positively injurious in the treatment of this complaint. The fact is the profession are too prone to routine practice. Having a pocket full of prescriptions, we fit the patient to the prescription, and not the recipe to the patient; we treat the name of diseases and not the morbid condition, as modified by the individual characteristics. This is the procrustian mode of practice; it certainly is not tinctured with rationality.

Another remarkable fact in medicine, and one which has seriously militated against progress, by creating a feeling of distrust in regard to the correctness of the observations taken and of the power of medicine, in effecting any given result,

is the marked discrepancies in the experience of physicians while using the same drug. The conclusions reached, are often just the opposite. One patient recovers while another dies, under what might be regarded as identical treatment. Such a condition of things, is certainly of sufficient gravity, to demand earnest and thoughtful consideration at the hands of the profession, for it has been extremely injurious to us, subjecting us to the imputation of empiric whim. We claim a niche in the temple of the sciences. If the drugs are alike and the disease be the same, this diversity of results must be sought for in the physician himself. It is a fact that may be affirmed without the fear of successful contradiction, that the difference between practitioners of medicine, consists not so much in acquirements of general knowledge, as in the power to apprehend readily morbid conditions of the system, and exhibit drugs just in that proper time as will meet the exigencies of the case, neither overdosing, nor giving too little. Still another hindrance to the advance of medicine, exists in the hide-bound character of our profession. Unless a remedy has been discovered and its therapeutic value made known by the regulars, they hold up their hands in holy horror, protesting against its employment and ridiculing any virtue that may be claimed in its behalf. This finds apt illustration in the medical history of the Gelseminum Sempervirens. Its properties were discovered by chance, and it was long before any of the profession recognized its extraordinary virtues, or used it in the treatment of disease.

And to day, among the great multitude of physicians in our country, there are but few who employ it in their therapeutics, at least if we judge the number by the articles in the journals Being one of those who have employed it rather extensively in the treatment of disease, and thoroughly convinced of its great power as a febrifuge, I propose to state a few facts regarding its use. The primary action of this drug is as a relaxant through the agency of the Sympatheticus. Such being the case, it is not difficult to imagine the various diseases in which its employment is indicated. It is an anti-congestive—Hyperænia is impossible, when the nervous centres are under the influence of this drug; congestion, (I may not be exactly orthodox in this point) in the malarial form at least, is as I apprehend, nothing but the nerves holding a tight rein on the capillaries; relax this tense condition and the blood flows on smoothly: Gelseminum will effect this result. This drug, as I shall presently show, is a valuable means of diagnosis. The disease in which it has been most frequently employed, is malarial Remittent fever, subduing in a short time this scourge of our Southern country; placing the patient in an excellent condition for the pleasant and decisive action of Quinine, quieting the tense nerves, allaying the tumultuous throbbings of the heart, and bathing the body in a profuse and delightful perspiration. And it is precisely here that it is a means of diagnosis. Taking a patient you see, it is impossible to distinguish malarial fever from the invasive stage of the eruptive fevers. To do this promptly is a matter of importance and is always gratifying to the medical attendant. Remain with your patient four hours, administer Gelseminum, and if the fever be malarial, the temperature will fall to the normal standard. This difference will not follow its use in the eruptive fevers; they are essentially progressive in character, and though the drug will render the condition of the patient more tolerable, yet it will not materially reduce the heat. A case to illustrate this point—Sometime since I was called to see a child who had been exposed, as it was thought, to the contagion of scarlet fever. Found the child almost in convulsions, with sore throat and a tempearture of 106° F. These to say the least, were suspicious symptoms and had scarlatina been prevalent, would have been mistaken for that disease. The parents were quite anxious, having had scarlet fever in their family some time back, and their neighbors were alarmed for the safety of their own children. I administered the Fl. Ext. Gelseminum, and in a short time the temperature fell to the normal standard, and the diagnosis was Remittent fever complicated with ordinary sore throat.

This marked power of reducing the temperature in the malarial fevers, will enable the physician to make a diagnosis between Remittent fever and the so-called Typho-malarial fever.—These diseases at the commencement are often quite similar in appearance, and often days are consumed in making a positive distinction. In the Typho-Malarial, the temperature at the beginning is as high as in Remittent fever, but after a few days falls to a lower standard and seems the cause of Typhoid fever. The Gelseminum will not reduce the heat in the latter disease as it does in Remittent fever. One case out of seven, to illustrate:—Was called to see a girl 10 years of age—found severe frontal headache, tenderness over the epigastric region, nausea and vomiting, bowels constipated, pain in back and limbs. Temperature 105° F. In fine presenting all the symptoms of Remittent fever and occurring at a time when that disease was prevalent—Gave the gelseminum as usual, with

no effect whatever on the temperature, which remained at this hight for 3 successive days, not varying a particle, then fell to 102° and ran the course of Typhoid fever. I gave quinine too, with no effect; when gelseminum will not reduce the heat, I have found that quinine will exert no material control over the disease.

In Remittent fever, the lungs, as is the case with other organs of the body, often become Hyperæmic; in which condition there will be severe pain—difficulty of respirating—dullness on percussion and sometimes Hæmoptysis during the hight of the exacerbation. The unwary physician might think he had a case of genuine Pneumonia in the middle of August. The Gelseminum will prevent his falling into such an error. Under its use the temperature is reduced. The hyperæmic condition of the lungs is relieved. The breathing becomes easy and pleasant in a short time and a few doses of Quinine end the disease. Was called to see a gentleman in the month of July; the patient complained of agonising pain in the chest and side, much headache, bowels constipated. Temperature 105° F. Dullness in percussion from almost entire right lung, skin hot, pulse full binding, some slight hæmoptysis. Gave Tildens' Fl.Ext. Gel. m xv., Morph. S. gr. ¼. In a short time, patient was in a profuse sweat, free from pain and discomfort of any kind, and in three hours, temperature reached normal standard. The dullness from the lung well nigh gone. Left 30 grs. quinine to be taken in 3 doses during the night. Returned next day, found patient still free from fever, had rested well during the night, and still feeling comfortable.

(*Continued in next number.*)

Lectures on Diseases of the Heart.

By Austin Flint, M. D.,

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[Reported for The Medical Record.]

SYMPTOMATIC PHENOMENA ACCOMPANYING ORGANIC LESIONS AT THE MITRAL ORIFICE.

Gentlemen:—I shall next ask your attention to the symptomatic events and diagnostic phenomena connected with organic lesions at the mitral and the aortic orifice. You will please recollect that I have divided valvular lesions into three groups:

1. Those which involve more or less change in the valves or orifices, giving rise to obstruction to the current of blood.

2. Those which involve incompetency of the valves and permit regurgitation of blood; and

3. Lesions which involve neither obstruction or regurgitation, and which therefore are innocuous.

In a practical point of view, the latter is a most important group. The signs which we have considered enable us to recognize valvular lesions; enable us to localize them, to determine whether they involve obstruction or regurgitation, or, as is not unfrequently the case, both obstruction and regurgitation. But there are lesions giving rise to signs that do not involve either obstruction or regurgitation, and for the time being, at least, are innocuous. Practically it is important that you should take cognizance of this latter fact, and not consider, because cardiac murmurs are heard, that we have, necessarily, lesions which are of very grave importance.

There is another clinical fact which is important, namely, the valvular lesions do not produce of themselves grave results. As a general statement, this is true. The valvular lesions do not as a rule produce symptomatic events until they have led to enlargment of the heart which stands in immediate relation with symptomatic phenomena. Further, the valvular lesions do not produce grave symptomatic phenomena until, in the enlargement of the heart, the dilatation predominates over the hypertrophy. The hypertrophy is a conservative provision, and as long as it predominates the organ is enabled to perform its function without grave difficulties; but when the dilatation predominates, the heart becomes weakened, and then it is that we have grave results as the consequence of valvular lesions.

Let us first direct our attention to lesions found at the mitral orifice.

In this specimen, as you will see, the mitral orifice is very much narrowed; so much so as to admit but little more than the end of one finger. The heart is also very much enlarged, but the enlargement does not effect the left ventricle at all; its walls are not thickened, and its cavity is not increased in size. But when we look at the right side of the heart, there is evidently an enlargement of the right ventricle; its walls are somewhat thickened, and its cavity is dilated. We have, then, in this specimen, hypertrophy with dilatation affecting the right side of the heart, and the dilatation predominates. I know nothing of the history of the case, but it is fair to presume that more or less of the symptoms to be spoken of to-day were exemplified during the life of the patient. Let us consider what those symptoms are.

In the first place, I will point to a general connection existing between the symptoms and

the lesion. In almost all cases of valvular lesion of the heart the progress of the lesion is slow. I hardly need say to you that in a very great majority of cases they have their origin in an endocarditis complicating acute, articular rheumatism. Now, for example, the patient has acute articular rheumatism, endocardial inflammation is developed, the patient apparently makes a complete recovery, and many years may elapse before any symptoms referable to the heart are developed. This is true as a general statement. What is the first symptom which attracts the patient's attention? Is it pain? No. As a rule, if we except angina pectoris, we may say that organic lesions of the heart are unattended by pain. This statement is quite opposed to the popular idea, so that we are often consulted by patients who are suffering from pain in the neighborhood of the heart, and naturally enough suppose that it indicates disease of the heart. In general the pain in those cases is due to pleurodynic or intercostal neuralgia.

The patient may have been conscious of more or less increased force in the heart's action, or palpitation, but very likely it has not attracted his special attention, even when he first comes to the physician. The heart's action has been increased in force for some time before consulting the physician, but this increase has taken place so gradually, so imperceptibly, that the patient has become accustomed to it, as a rule, and does not regard it as worthy of mention. Again, a patient with organic disease of the heart may have palpitation as a functional disorder irrespective of that disease. It is not uncommon for persons to suffer from functional disorder of the heart in consequence of anæmia, etc., and under those circumstances the functional disorder may occur and have no connection at all with the organic lesion. This is an important practical point to be decided in individual cases, but I will not stop to take the question into consideration at the present time. We do not, then, find that the patients have pain, or complain of disturbed action of the heart as the first symptom of organic disease, but as a rule, that which leads them first to consult a physician is *want of breath upon exertion.*

In general, the symptoms proceeding from each kind of valvular lesion at the mitral orifice are the same. There is no special or material difference.

The want of breath upon exertion is the symptom of which the patients commonly first complain, and when they are asked how long they have suffered from shortness of breath, it will be found that perhaps they have noticed it for weeks or months. It has finally increased to such an extent that they are unable to take any active exercise without panting, and that fact leads them to think there is something wrong, and they consult a physician. We then examine the chest, and find evidence of enlargement of the heart with mitral lesion, obstructive or regurgitant, or both. Assuming that the disease is progressing, that the dilatation ceases to hold a direct proportion to the compensating hypertrophy, the want of breath upon exertion grows more and more troublesome, and finally there is constant suffering from that symptom, even while the patient remains at rest. The reason why these patients suffer from want of breath is, that the valvular lesions prevent the free passage of blood through the lungs; in other words, gives rise to pulmonary congestion, and in proportion as the blood flows with insufficient force it is insufficiently oxygenated, and hence the feeling of want of breath.

Following out this effect, there comes a time when the patient suffers from more or less dyspnœa constantly, is unable to lie down at night, and he suffers from great fatigue incident to the fact of being unable to assume the recumbent posture.

When the dyspnœa has reached this degree, there is one symptom which is almost uniformly present, and that is general cardiac dropsy. When we have general dropsy it proceeds usually from lesions either of the heart or kidneys; hence the divison, cardiac and renal dropsy. General dropsy may occur from other causes, but, in general, when present, it depends either upon cardiac or renal disease, or upon both combined.

The cardiac body makes its first appearance in the form of œdema of the lower extremeties, and extends more or less rapidly, until finally the œdema becomes generalized, and we have anarsarca. When this is the case there is usually more or less fluid in the serous cavities of the body.

There is a certain degree of relation between the quantity of dropsy existing in the serous cavities and that present in the subcutaneous areolar tissue; and, although it cannot be expressed mathematically, yet, in a practical point of view, the relation is certainly very clear. If we find that there is dropsy of the peritoneum, much out of proportion to the subcutaneous œdema or anasarca, we have a right to infer that we have to deal with something more than cardiac and renal disease, and probably it will be found that disease of the liver is also present.

Fortunately, there is not so much dropsical effusion into the pericardium, in connection with general dropsy, as into the peritoneal or pleural cavities. Now, this general dropsy, other things being equal, we may consider as evidence of weakening of the heart from dilatation of its cavities. To what does that stand in an important relation? It has a direct and important relation to dilatation of the right side of the heart. We have seen, and this specimen illustrates that fact, that the first effect of mitral obstructive or regurgitant lesion is to produce dilatation of the left auricle; then follows pulmonary congestion, and as the result of that congestion the right side of the heart becomes over-filled; the consequence is an undue action is excited; hypertrophy follows to compensate, and goes on until it reaches its limit, and then dilatation takes place and increases until it becomes predominant. When this point has been reached, there has been more or less dilatation of the right auricle, and then we have an obstruction to the return blood throughout the system.

The dropsy then stands in immediate relation to weakening and dilatation of the right side of the heart, and, still further, to dilatation of the right auricle.

There is another cause for dyspnœa, in these cases, other than mere pulmonary congestion. Pulmonary œdema is liable to occur. It rarely occurs in connection with mitral obstruction and regurgitation as a sudden development, but to a greater or less extent it is liable to occur as a result of the constant pulmonary congestion, and when it does occur diminishes the pulmonary capacity and increases the dyspnœa. Auscultation will enable you to determine how much pulmonary œdema is present. The pulmonary congestion leads to more or less cough and expectoration as the result of a low grade of bronchitis. In a considerable portion of cases blood will be found mixed with the sputa, or the patient may have a pure hæmoptysis. It is rarely the case, however, that the bronchial hemorrhage is profuse in this class of cases.

These are the important pulmonary symptoms which stand in direct relation to mitral lesions.

Now with regard to the *pulse* as representing the condition of the heart. It is evident, when mitral obstruction is present, that the quantity of blood in the left ventricle is considerably under that present when the orifice is healthy; hence, it is easy to understand that the effect upon the pulse would be to make it small and feeble, because of the diminished amount of blood thrown forward into the arteries. Suppose we have mitral regurgitation, then a portion of the blood is thrown back into the auricle which should be sent forward into the aorta, and the effect upon the circulation is the same as with mitral obstruction. We therefore have a weak pulse as representative of mitral lesion, whether that lesion be obstructive or regurgitant. If hypertrophy predominates over dilatation, a very striking contrast is afforded by comparison of the cardiac impulse, when the ear is placed over the præcordium, with the impulse given to the finger when placed on the radial artery. The impulse of the heart will be found stronger than in health, while the pulse is much weaker. With regard to the rhythm of the pulse, we find a marked difference in different cases. In some cases, with considerable organic lesion, we have a regular cardiac action and regular pulse. In other cases, however, we find the action of the heart to be irregular, both in kind and in degree, and such irregularities are not easy to explain.

In cases in which dilatation has taken place, and there is very considerable obstruction or regurgitation, or both, we may have these irregularities, and it is important that that fact should be borne in mind. If the heart be weak as regards the force of successive systoles, we may not find a pulse which represents every systole; that is to say, the systolic contraction of the left ventricle is sometimes strong enough to produce a pulse at the wrist, and sometimes not. If, therefore, we are guided by the pulse alone, without auscultating the heart, we may be led into error with regard to the frequency of the heart's contraction. Not unfrequently we find a pulse numbering no more than 80 or 90 to the minute, when by auscultating the heart, and counting the systoles, it will be found that they number as high as 100, or 110, or 120 to the minute. In cases, therefore, in which the heart is found weak, it is important to correct the pulse found at the wrist by results obtained by auscultating the heart. When we have dilatation of the right side of the heart, producing dropsy, there is also, as a matter of course, general venous congestion, which is especially apparent in the veins of the neck; they are increased in size, and usually are turgescent. Under these circumstances, we may have venous pulsation, more frequently observed upon the right than upon the left side of the neck, and such pulsation may be present with or without turgesence of the veins. It is rarely the case that pulsation of the jugular vein can be appreciated by the touch, but it is very apparent to the eye. It is also easy to determine whether

the visible pulsation is venous or arterial; for, if we make slight pressure upon the vein just above the clavicle, sufficient to obstruct the flow of blood through the veins into the heart, if the pulsation is venous it will be suspended. It may be the vein lies so near the artery that you will imagine the visible pulsation is due to pulsation in the carotid; but the amount of pressure required to obliterate it is not nearly so much as would be required to cut off the arterial circulation.

We may go still farther, and these are nice points in physical examination.

This pulsation may be produced by the contraction of the right ventricle causing a current of blood to be sent back into the right auricle and transmitting an impulse which becomes visible in the veins of the neck. There is one way in which venous pulsation is produced, and it is called the ventricular venous pulsation. How are you to determine whether it is produced in that manner? First fix the eye on the pulsating vein, then place the finger on the carotid artery of the opposite side, and then observe whether the two pulsations are synchronous. If synchronous, it is evidence that we have venous pulsation, produced by contraction of the right ventricle.

Again, the venous pulsation may be produced by contraction of the right auricle. How can you show that such is the case? It is done by the same method; that is, look at the pulsating vein, place the finger upon the carotid on the opposite side, and now, if the venous pulsation is auricular, it will *precede* the pulsation of the artery, because the contraction of the auricle precedes the contraction of the ventricle.

Again, we may have two venous pulsations for one arterial, and it is easy to determine that also. It is done by fixing the eye upon the pulsating vein and the finger upon the artery as before, and then determining by count whether we have for each carotid pulse a double venous pulsation. These are the prominent events, or sympathetic phenomena, which stand in relation to disease of the heart, involving mitral obstructive lesion or mitral regurgitant lesion, or both.

As regards the other anatomical systems of the body, the excretory, the digestive, etc., these may not be very materially affected; at all events, they do not give symptomatic phenomena which are distinctive of this event.

At our next lecture we shall pass to the consideration of symptomatic phenomena following lesions at the aortic orifice; obstruction or regurgitation, or both, and from those pass on to the study of enl argement of the heart.—*Medical Record.*

On the Generation of Bacteria in Urine.

By Francis Gerry Fairfield.

I desire, as a medical student, to lay before the readers of The Medical Record the results of a series of experiments that have an important bearing upon the origin of bacteria and vibrios in diseased tissues. The inference, for example, is a fair one, that if an experimentist were to introduce through a catheter a small quantity of liquor potassa in the living bladder, and to detain it there for thirty-six hours, the result would be an abundant generation of bacteria in the urine thus detained—in other words, an artificially produced diphtheria of the bladder.

It is not my intention in what follows to venture upon any discussion of the varied experiments that have been instituted of late years, with a view to settle the still-contested issue whether, under favorable circumstances, minute organisms my be developed in vegetable or animal infusions without the presence of antecedent germs. In England, Professors Huxley, Tyndall, and Bastian; in France, M. Pastur and others; in Germany, Cohn, Hueckel, and Dollinger; in this country, Professors Wyman and Clarke, of Harvard Collage and other eminent microscopists, have all contributed important memoirs to the literature of spontaneous generation, the third in order and the last two having taken decided ground in favor of obiogenesis, and the rest more or less decided ground against it. The latest aspect of the subject, and one that has revived the controversy in all its virulence, is presented by a series of experiments recently instituted by Dr. Bastian, in England, and repeated and verified by the eminent M. Pasteur. As my own experiments, conducted after Bastian and Pasteur, have been attended with surer results than they record—results that appear to me to settle the question at issue with an unanticipated certainty—I shall first detail them with all possible brevity consistent with sufficient exactness, and then indicate the conclusions to which they have inevitably forced me.

Tuesday, April 10th, at 12 o'clock, noon.—Having first carefully tested three bottles, each of the capacity of four ounces, with absolute alcohol, they were immersed for ten minutes in boiling water, 241° F. On removing No. 1 from the water it was instantly filled with urine transferred, without coming in contact with the external air, directly from the bladder of a healthy male, and liquor potassa at the temperature of 221° F. was added in a sufficient quantity for neutralizing the excretion. The bottle was then stoppered with a rubber stop-

per taken from the boiling water, the liquid overflowing as the stopper was pressed in, so that not a single bubble of air remained. It was next dipped to the shoulder in melted wax, and thus hermetically sealed. Finally a filter of cotton batting was drawn over the stoppered end and tied securely in its place, and the whole protected with a tightly fitting rubber cot descending to the shoulder. The operation took exactly four minutes and thirty-seven seconds.

On removing bottles No. 2 from the water it was instantly filled with urine at a temperature of 236½° by an accurately graduated medical thermometer, liquor potassa at 221½° being added for neutralizing, and stoppered in exactly the same manner, with the addition of cotton filter and rubber over-shield. No. 3 was filled under the same conditions with urine and potassa, and corked with an ordinary cork. Without any precautions whatever, two two-ounce test-tubes were then filled, the one with boiled, the other with untreated urine, sufficient potassa added to each, and placed open in the test-tube rack. The urine was all drawn from the same person, and the specimens were all placed on the mantel. The temperature in my room during the experimental thirty-six hours following varied from 73° to 77° F.

April 11th, at 11 o'clock P. M.—Having prepared five slides with cells constructed by removing from inch-square sections of tinfoil a central disk one-half an inch in diameter and then cementing the sections to the surface of the slides, I cleaned five inch-square covers. On test with dropping-tube the capacity of one of these cells was exactly one drop. The examinations were conducted with a $\frac{1}{10}$ inch objective, giving with C eyepiece, tube drawn, 1,250 diameters. Opening bottle No. 1, which was thoroughly shaken at the instant of unstoppering, I commenced my examinations at midnight, by transferring a single drop to one of the cells, covering it, and searching it field by field, with the stage of the microscope adjusted to an exact leved. The drop was absolutely swarming with minute forms of life, among which the most numerous were cylinder-like bodies about $\frac{1}{7000}$ of an inch long, and $\frac{1}{60000}$ of an inch in diameter. A few specimens of the familiar bacterium termo, an occasional moniliform vibrio, and monads only less in number than the bacilli, presented themselves as field after field was gone over with. Counted ten fields in ten consecutive drops, and registered the result of each field. The total count for 100 fields was 591. No. 2 yielded under the same count 67 organisms to 100 fields. No. 3, as to which no special precautions were taken, 289 in all to 100 fields. Test-tube No 1 gave 227 to 100 fields; test-tube No. 2, unboiled, 608 to 100 fields Now, as the actual diameter of the field with C eyepiece, tube drawn, measured by Nobert's rulings, was almost exactly $\frac{1}{1000}$ of an inch, and as the cell was half an inch in diameter, the number of such fields contained within its area was $\frac{1,000 \times 1,000}{2 \times 2}$ = 250,000; upon which basis the number of organisms to the ounce in each specimen may be readily calculated, counting, as in the case with our more delicate dropping-tubes, about 500 drops per ounce.

	Per drop.	Per ounce.
Bottle No. 1..	1,477,500	737,750,000
Bottle No. 2..	167,500	83,750,000
Bottle No. 3..	722,500	361,250,000
Tube No. 1....	567,500	283,750,000
Tube No. 2...	1.520,000	760,000,000

Transferred one-eighth of an ounce from bottle No. 1 to a blue glass culture camera, and re-examined it at the expiration of twenty-four hours. The number of bacteria had considerably diminished, but the field was studded with large cellæform germs, with bacterium colonies densely packed together and apparently dead, and presented an extraordinary fungous development, which evidences that some of these low forms of life are animal only in their earlier stages.

Thursday, April 12th, 12M.—Repeated the preceding experiments with specimens of healthy urine, all obtained from one person, not the same as in the first series.

Friday, 12 o'clock, midnight.—Commenced a series of examinations as before, and finished at 7 o'clock Saturday morning, with the following tabular result:

	Per drop.	Per ounce.
Fresh urine, unboiled....	1,022,500	511,250,000
Urine boiled.....	130,000	95,000,000
Same, without precautions	590,000	295,000,000
Open tube, boiled.....	527,000	263,500,000
Same, unboiled.....	1,817,500	908,750,000

Monday, April 16th, 12M.—Prepared two bottles of urine from a patient in advanced stages of Bright's disease of the kidneys, in exactly the same manner as Nos. 1 and 2 in the first series of experiments. Result per 100 fields, at the expiration of thirty-six hours, 832 for fresh, and 244 for boiled urine—not so large an advance upon the results obtained from the healthy excretion as I had anticipated.

The extraordinary fact that appears in experments conducted with urine consists in the almost inconceivable number of organisms devel-

oped, and in the tremendous rapidity of the process, which on comparing the results from bottle No. 1 with those from tube No. 2, are neither accelerated nor diminished materially by the exclusion or presence of free oxygen. Another curious fact is that in every instance the slight cloudiness denoting the appearance and progress of vital phenomena commenced at the bottom of the bottle or tube and slowly involved the upper strata of the liquid. Now, the specific gravity of liquor potassa is a little greater than that of urine. Consequently, upon its addition to the specimen, the formation of urate of potash crystals commences at the bottom of the vessel. In such cases I added potassa until a few crystals appeared, and then, after stopping, shook the specimen. The development of the cloud invariably commenced within thirteen hours after the addition of the potassa, and proceeded from below upwards until the liquid was slightly opaque and had a whitish lustre from top to bottom, the opacity predominating beneath. Now, taking into account the fact that the life-term of a bacterium must be reckoned at from twelve to fifteen hours, and that the transformation of bacteria into fungous developments is evident, at least as respects some of their varieties, it is not only practically, but absolutely impossible to explain the tremendous number of organisms in bottle No. 1, or even in No. 2, by assuming that a few germs previously floating in the atmosphere my have passed through the rubber hood, the filter of cotten, the sealing of wax, and the rubber stopper, and infected the contents beneath. Assuming such germs to be the products of pre-existing bacteria, as every microscopist is aware, such organisms are too rarely met with to account for such a myriad development within thirty-six hours even in an open vessel. If, as is certain as concerns some species of the bacterium—the bacterium termo, for example—such minute organisms are stages in the develoment of microscopic fungi, then their germs can be identified at a high power. Now, not with a view to a demonstration on this point, but in order to determine, if possible, the effect of dirty streets on the condition of the atmosphere, I had previously conducted and recorded a very simple series of experiments, by spreading drops of balsam upon slides and leaving them exposed to the air upon the mantel for forty-eight hours. In no instance, in the many experiments so conducted, have I ever found more than a dozen identifiable germs of any class to have settled upon a circle half an inch in diameter in forty-eight hours; so that, in whatever light one views the problem, the hypothesis of organizable matter introduced from without is inadmissible—more than that, absurd and impossible. The conclusion must be, then, that such organizable matter was present in the urine when it was withdrawn from the human body, and that, as a factor in their development, contact with the atmosphere was of no practical importance; and yet during a practice of years in medical microscopy, having studied more than 3.000 specimens of urine in conditions of health and disease, I have detected now and then, but very seldom on the whole, a few specimens of bacteria and possibly a few micrococci, such as are found occasionally in ulcers and abscesses. On one occasion, after permitting a mouse to putrefy under a bell-glass, I found abundant bacteria in sections of muscle. I doubt whether atmospheric germs were materially concerned even in this case. On the contrary, it is pretty clear from all the facts that these minute organisms are simple products of putrefaction, and nothing more than that. Moisture and temperature have a perceptible influence in hastening their development, but in other respects the external conditions are unimportant. How minute such germs must be, if such organisms spring from them, is evidenced by this: With $\frac{1}{16}$ inch objective, using a C eyepiece, given with tube drawn, 2,100 diameters, my eye could not fail to detect and appreciate an organic particle $\frac{1}{1000000}$ of an inch in diameter, while the minutest micrococci I have ever observed, in specimens of the saliva of a rabid dog, are not less than $\frac{1}{300000}$ of an inch, and the spherules in acvaccine, animals germs most likely, are somewhat larger than that. Some vibrios—and probably all in their earlier stages—are simple strings of minute granules about $\frac{1}{300000}$ of an inch in diameter. Now, my own observations lead me to believe that these minute granules are spontaneous developments of decomposition, produced by a series of molecular changes in the decomposing tissue or infusion. It is possible—probable, even—that the decomposition of a tissue or an animal or vegetable infusion disengages millions of organic molecules which are capable, under favorable conditions, of producing such lower forms of life as monads, bacteria, and vibrios, and that our bodies are thus in themselves billions upon billions of possible minute organisms. In a word, the specimens of urine under experiment contained millions of organic molecules, to which the potassa supplied the essential condition for development into forms of life appreciable by the microscope.

On Monday, April 16th, examined the con-

tents of an hermetically sealed culture cell, in which a couple of drops from specimen No. 1 had been growing since the date of opening the bottle. A few monads and bacteria were visible in the field by a one-eighth inch glass; but the greater part of the urea was occupied by a fungous growth, amid the meshes of which were scores of amœbæ in rapid motion. On searching the specimen more carefully I found three fully developed animalculæ of a species entirely unfamiliar to me, not moving by means of vibrating cilia, but by alternate expansion and contraction. This one experiment demonstrates nothing, I confess; but it suggests that monads and bacteria are but stages in a development of life that passes from them into a vegetable form, and finally terminates it the amœba and the higher animalcules.

May 27th.—Since the foregoing observations were prepared, a case has come under my notice which curiously illustrates one of the points at issue. Miss J. K., of this city, tolerably healthy in appearance; not at all exsanguinated; persistent pain in the frontal region; relish for food rather increased than impaired; considerable swelling of the joints. Has had severe attacks of dyspepsia, and is an invalid of several years' standing. Attended by Dr. Comstock, 83 Lexington Avenue; case recently diagnosed, Dr. Comstock tells me, by Dr. Flint, as one of Bright's disease of the kidneys. Specimen of morning urine examined May 22d. from six to seven hours after evacuation. Specific gravity normal; deficiency of uric acid and urea; sediment after heating abundant in mucous and epithelial débris. No casts; reaction neutral. So extraordinary was the development of bacteria in this specimen, that, within the field of a one-fourth inch objective—field $\frac{1}{250}$ of an inch in diameter by micrometer—they actually swarmed by the hundred. Counted six fields, with the result of 121, 132, 101, 147, 103, and 159. Dr. Comstock had previously diagnosed rheumatic arthritis—a diagnosis rather militated against by the conspicuous deficiency in uric acid and urea. Suspecting mesenteric disease, there bring no history of syphilis, I suggested hyposulphite of soda in fifteen to twenty grain doses, twenty minutes before eating. Examined a second specimen this evening (May 27th). Same general description, with the exception that the bacteria are lying dead under the glass by hundreds, instead of being in active motion as before. Dr. Comstock reports that the patient is mending under the exhibition of the hyposulphite. The curious fact here is that there have been no symptoms of diphtheria of the bladder, as would naturally follow from the bacterial theory of diphtheria. As it happened, on the same evening, May 27th, an opportunity to examine some fresh sections of diphtherial membrane occurred in the case of a boy, five or six years old, brought in for examination. The membranous structure of the sections was well marked, and numerous fungous spores and cells, as well as filaments, were visible, but not a single bacterium appeared. Is it not possible that the bacteria noticed by foreign observers my have been accidental products, not concerned in the causation of the disease? I have met them sometimes in saliva taken from the mouths of rabid dogs immediately after death, but only twice in eleven examinations during the last four years, while a well-marked vegetation that I will take the liberty of styling the *Penicilium rabiei caninæ*, has been unfailingly present in great abundance.—*The Medical Record.*

Oxytocics.

BY W. N. SMART, M. D., HUDSON, MICH.

Read before the Southern Michigan Midical Association.

"Medicines which promote delivery." This is the definition which Dunglison gives to this term, but I think that it is generally given a wider meaning than this, and used to denote any drugs that induce or maintain contraction of the gravid womb or of the womb immediately after delivery.

The drugs classed under this head may be divided into two classes: first, those which exert a specific action on the uterus; second and auxiliary to the first class, those which only induce contraction of the uterus by their tonic effect on the system at large. In the first class may be placed ergot, gossypium and cimicifuga; to the second class belong all diffusible stimulants, quinia, and perhaps strychnia.

Ergot is unquestionably the most powerful oxytocic known, and if given in sufficient dose, will rarely fail to exert its specific action. Ergot does not increase the power of the healthy physiological contractions of the uterus, so much as it substitutes an abnormal action for a normal one. The normal contractions of a clonic character, energetic contractions being followed by a stage of rest and relaxation, while the contractions produced by ergot are of a tonic character there, being but little or no relaxation at all, at any stage before the presenting portion of the child has pretty fully dilated the perineum, and there remains no obstacle to the speedy completion of labor. I think the

action of ergot both uncertain and dangerous. In cases where, during the stage of rotation and descent, the pains have become weak and insufficient, I have sometimes given ergot, and in quite a large proportion of the cases have been disgusted to find that instead of the pains becoming more efficient, while they become almost continuous and very harassing to the patient, they accomplish less than they did before. This I do not think was because the ergot did not exert its usual influence, but because it substituted a tonic contraction for a clonic one in a muscle already nearly exhausted, and owing to this condition of partial exhaustion, the tonic contractions produced by the ergot were not of sufficient force to do more than hold the head pressed very firmly down into the pelvis, and produce perhaps still farther exhaustion. This I believe to be the most common result of the administration of ergot during the first and most of the second stages of labor.

Dr. Williams, of Baltimore, reports a case in the *Medical and Surgical Reporter*, of Oct. 26th, 1874, that bears so directly on this subject that I have quoted it briefly: "Mrs. A., a young woman of fine physique, and who had no untoward symptoms during her pregnancy, was confined with her first child in October 1873. She had a long and tedious labor, during which I gave her 5 or 6 one drachm doses of the fl. ext. of ergot with *very little effect.* After the head had remained some time in the pelvis without apparent progress, I determined to apply the forceps and the child was extracted without difficulty. Every thing went well with the case for a time, when without appreciable cause, the uterus became relaxed completely, producing a profuse hemorrhage. After using the customary remedies without effect, I injected ½ drachm of the fl. ext. of ergot into the inside of the left thigh, immediately I again thrust my hand into the uterus, and my anxiety was relieved by finding that the uterus was beginning to contract vigorously, and it promptly expelled my hand."

At the July, 1875, meeting of this Association, Dr. Stoddard, of Albion, reported a case of delayed labor, in which the medical attendant finding the pains getting weak, gave ergot in increasing doses, which, to use the doctors own words, had no effect whatever, except it might be *to quiet all labor pains.*

I think that any one will be convinced of the tonic character of the contractions induced by ergot, if they will take the trouble to keep the hand on the abdomen over the uterus, or against the presenting portion of the child, after its administration. While this tonic contraction induced by ergot is sometimes (and I think in the majority of cases,) so mild as to merely arrest the normal alternation of contraction and relaxation, and to harass the patient, it is in other cases, very energetic, and as the action of the drug begins to manifest itself, the pains become more and more frequent and last longer, till finally we have the continuous and powerful contractions of ergot, which from their continued and powerful character must prove very disastrous, both to the mother and child, if delivery is not speedily accomplished. The danger to the child is much greater than to the mother, for it is only during the intervals of relaxation that the child can receive a sufficent supply of oxygen, through the mother to prevent suffocation. If the liquor amnii has escaped early and the uterus is contracting down on the irregular surfaces presented by the child, it may rupture itself; or if the perineum be not readily dilatable, it may be ruptured, or if this should have sufficient firmness to resist the action of the uterus, and the powerful unintermitting pressure be brought to bear for any length of time on a given point, it will be very apt to result in a vesico vaginal or recto vaginal fistula, from the death and sloughing of the parts so pressed upon. Now while the action of ergot is thus uncertain and dangerous during the first, and most of the second stages of labor; near the close of the second and during the third, its action is most certain and beneficial; it is at this stage of labor that the natural efforts of the uterus approach nearer and nearer to those produced by ergot, till we find nature imperatively demending a firmer tonic contraction.

Here then, as elsewhere, we shall find that our success will be greater if we try to assist nature at such a time, and in such a way as she herself points out, than if we try to act in any way independent of her. Thus in the case already quoted of Dr. Williams, we see that while the ergot produced no effect during the second stage of labor, that its effects were very very marked and salutary when given after the birth of the child, and at a time when the efforts of nature were of the same character as those produced by ergot. I have been very rarely disappointed when I have given ergot, at, or near the close of the second stage of labor, and I think that in all cases where the pains have been inefficient, or we have any reason to suspect uterine inertia, we should give ergot in full doses as soon as the perineum is well dilated, and their exists no impediment to speedy delivery; but never before this time,

unless it be in cases of "placenta previa," where the ergot might be of service in preventing those relaxations during which most of the hemorrhage takes place.

CIMICIFUGA.

Our eclectic brethren use this drug largely as an oxytocic, and although I believe that it is very little used by the regular profession for this purpose, I think that it posesses decided virtues. In some fifteen or twenty cases in which I have used it, I think that I have seen very decided effects. It is in the earlier stages of labor that it seems to be of special service, for unlike ergot it appears to increase the normal clonic action of the uterus. It is in that class of cases where without any great degree of exhaustion the patient becomes nervous and the pains weak and irregular, that I have found the most benefit from the use of cimicifuga. After the administration of one or two half drachm doses of the fl. ext. the nervousness vanishes and the pains soon return with their former and generally increased degree of vigor. It is probable that this action of cimicifuga is upon the nervous system, giving tone and restoring co-ordination, as it is well known that it does in chorea and similar diseases.

QUINIA.

Of the second or auxiliary class of oxytocics, none deserve special mention except quinia, and this only on account of the claim that is frequently made for it, that it possesses a specific action on the uterus. In 1871, Dr. Monteverdi, anounced that "quinia is a uterine stimulant, causing at times contractions in the gravid womb of sufficient violence to induce abortion, and when given during labor intensifying greatly the uterine pains, and after labor causing rapid expulsion of the placenta and arresting hemorrhage. Although this was received at the time as something new, as long ago as from 1855 to 1860 the subject was discussed in several of the southern medical journals. In 1858 Dr. J. J. West, wrote in the Savannah *Journal of Medicine*, as follows: Many regard the use of quinine as dangerous, and even criminal in any disease in pregnant women. The belief of these is that this substance exercises a direct influence upon the uterus, causing powerful contractions and expulsion of the fœtus. He then goes on to say, that these abortions, etc., are due to the intermittent fever and not to the drug.

From the above it is clear that the oxytocic action of quinia was believed in many years ago by many of our southern practitioners. The question now is whether the drug has any such action or not? This question should be answered in two ways: first is there any evidence of quinia producing abortion in healthy women, or in the female of other animals, and is this evidence of such a character that it would not be as reasonable to attribute this action to other causes, as to any specific action of the quinia; and second, what is the evidence in regard to the action of quinia during labor? I have been unable to find any record of any experiments made on animals, except some made by M. Rancillia, who saw abortion in two bitches follow the administration of from six to nine grains of quinia; but as the pups were in one case already dead before the administration of the drug, the evidence in this case does not seem to be of much value. With regard to the action of quinia on pregnant women, some cases reported by Dr. Blackwood, of Philadelphia, in the *Medical and Surgical Reporter* for January 9th, 1875, are I think; as strong evidence as can be found in favor of this action. In all of the cases abortion followed soon after the administration of several large doses of quinia, but as the cases were all suffering from intermittents at the time, which were not arrested till after abortion, and then were easily controled by quinia, I think that the inference from the cases in that the quinia restored the normal functional activity of the system, thus enabling nature to complete a process which the malarial poisoning had already rendered inevitable; rather than that this result was due to any oxytocic action of the quinia.

Dr. Erickson, of Kendallville, Indiana, says: (*American Jour. Med. Science*, July, 1872.) That in a practice of eighteen years in one of the most malarial districts of Northern Indiana, he has given the same treatment to pregnant women as to others, and that but few escape the fever at some stage of the gestation; yet in not a single instance did it develop uterine contraction, "*de novo*," but if they already existed at the time the quinia was given, then in a certain number of cases it did certainly increase their force, but had but little influence on their pregnancy.

Dr. Plumb, of Red Creek, New York, says: (*American Jour. Med. Science*, July 1875.) That he has practiced for more than twenty years in a malarious district and has very often given quinia to pregnant women without any ill results, and that for the last fifteen years he has used it as an oxytocic. Dr. Plumb thinks that under quinia the labor pains preserve their natural intermittent character, and do not become a continued pressure as under the influence of ergot.

Prof. Chiari, has given quinia to forty patients in the Royal Catherine Institute of Milan, and has come to the following conclusions as to its action:

First—The disulphate of quinia has no action as an abortifacient.

Second—Quinia cannot be trusted for the induction of premature labor.

Third—In cases of slow or irregular labor it is not well to trust to the action of quinia.

Fourth—When it is indicated by the presence of general morbid conditions it should be given not only as a remedy for the disease, but as the best means of preventing abortion.

Dr. Albert H. Smith, sums up his conclusion at the close of a paper on this subject, as follows, embodying I think the true fact of the matter:

First—That quinia has no inherent power of stimulating the gravid womb to contractions, being inert as to any effects upon the womb in a quiet stage, and having no decided action in accidental labors at any period of gestation.

Second—That to its property as a general stimulant and promoter of vital energy and functional activity, and *to that alone* is due its influence upon the uterus in normal parturition, producing then no action peculiar to itself, but merely increasing the power of the uterus to expel its contents by its own natural efforts, converting what is a defective or even pathological action, into a simple physiological process.

Third—That by availing ourselves of this power of quinia, we may by administering doses of it at the outset of labor, favor the rapid and safe termination of what might otherwise be a tedious and exhausting work.

In the few cases in which I have given quinia during labor, I have been unable to see any effects without it was perhaps to nauseate my patient. Then in answer to our question with regard to the action of quinia, we find that there is no sufficient evidence that it possesses any power over the impregnated uterus when not already in a state of contraction, and that while it does possess some power of assisting an already active womb, that there is nothing specific in this action, and that it is the result of its general tonic action. To recapitulate then:

First—When during labor, if by reason of exhaustion or from other causes, we find the functional activity of our patient below par, quinia should be given in full doses.

Second—In cases where the pains become weak and irregular, and the patient nervous, rather from a disordered innervation than from exhaustion, cimicifuga should be our remedy.

Third—That at the close of the second and during the third stages of labor, we can trust with a good deal of confidence to ergot, and that it will rarely disappoint us at this most critical period, but that when used at an early period it will very often disappoint us and may do irreparable mischief.—*Toledo Med. & Surg. Jour.*

Hay Fever.

The theory that the pollen of flowers and and grasses is a potent factor in causing this disease, although maintained by many, will not bear a very close investigation, without throwing some doubt upon its truth. In this country the large number of cases occur in the latter part of the summer, when the pollen is not half so abundant as it is in the earlier part of the season. In England the disease abounds, for the most part, in the spring months, when the pollen is supposed to be most vigorous. In France and Germany it is very rarely seen. Pollen must, of necessity, be more abundant in the country than in the city, and yet hay fever is a disease of the city; not many sufferers are to be found among our farmers, where, if pollen be the cause of the disease, we would naturally expect to find a large number of cases. Still it must be said to the credit of the pollen theory, that a hay fever sufferer will be relieved in a few hours by riding the blue billows of the ocean; a sea voyage brings immunity from the fact that there is no pollen in the air. Again, is has been noticed by persons who stay near the sea shore as a means of relief—a custom that is followed in England—that when the sea wind blows they experience great relief; but as soon as the wind changes and the land wind blows, these very parties are in the midst of trouble; the land wind being, filled with the pollen, and the wind from the sea being, of course free from it.

While there can be no question as to the irritating properties of pollen, dust, etc., and that the disease is very much aggravated thereby, yet, from the large number of special causes enumerated, we are led to conclude that many grave errors have been made in citing some things as *causes*, which should properly have been called simply *excitants*, or agents of irritation to an already diseased condition. There must be something more than these irritants to produce hay-fever. Thousands of individuals are exposed during the summer

months to these same excitants, yet no symptom of hay-fever develops. Why should hay-fever be a disease peculiar to the educated class? Among the poor and laboring classes the disease is rarely seen, although they are certainly more exposed to the action of these agents that are supposed to cause it than their more favored brethren. And yet, in your dispensaries, where are to be seen every form and phase of disease, you never see hay-fever. Of 154 cases collected by Dr. Phoebus, 146 were educated; 8 uneducated persons.

The reason why it prevails among this class of individuals, is because the nervous diathesis or temperament is peculiar to them, while their modes of living, habits and pursuits in life are of such a nature as to render them much more liable to the influence of anything calculated to depress the nervous system than is the case in that class who make use of their muscles rather than of their brain—[Dr. Thos. B. Evans, in *Toledo Med. and Surg. Jour.*

The Value of Frequently Repeated Small Doses of Medicine.

ALUM FOR VOMITING IN PHTHISIS.

In the vomiting which often complicates phthisis pulmonalis and its allied affection, chronic bronchitis, independent of that brought on by the cough, it is of the utmost importance to be possessed of a reliable remedy to check it. It is almost astonishing to observe with what happy success small doses of alum, say from three to five grains, given in solution with some aromatic water, as cinnamon, for instance, acts here. When the vomiting in these cases is frequent and severe, I have given the alum every second or third hour, but otherwise three times a day is sufficiently often. Rarely does the remedy need to be used beyond twenty-four hours. In a few cases that came under my observation, the vomiting, after having disturbed the patient for several days, has ceased after the second dose of the alum.

After some children have passed through an attack of pertussis, especially those of a lymphatic temperament, they are apt to be harassed with a troublesome cough for many months, which appears to be a slow winding up of the original disease.

TARTAR EMETIC IN BRONCHITIS OF CHILDREN.

There is a form of bronchitis seen amongst children, where a large number of coarse mucous râles produce loud wheezing with an asthmatic quality of cough. The wheezing is the symptom that the mother is most likely to complain of, and together with the cough is most intense at night, both almost entirely disappearing during the day. Such cases very readily yield in my practice under the use of tartar emetic, given in solution in the proportion of a grain to the pint of water. Of this solution a teaspoonful is given every one or two hours, with the best results, sometimes, according to Ringer, relieving the noisy wheezing after one or two doses.

Often in children we find a catarrh of the bronchial and intestinal mucous membranes, either coexisting or alternating with each other. When such a condition persists after the employment of the ordinary household remedies, tartar emetic in the same doses of the solution just before mentioned, hourly repeated, will check both catarrhs, without the use of further treatment.

ERGOT IN RETARDED MENSTRUATION.

Two cases of retarded menstruation, occurring in healthy females, non-pregnant, and ordinarily regular, have been treated by me with drop doses of fluid extract of ergot, hourly repeated. The menses appeared within twelve hours after treatment was commenced. In one of the cases the same treatment was employed a second time, one year after the first, with a like success.

BELLADONNA FOR SORE THROAT AND ACUTE ERYSIPELAS.

Bartholow pronounces strongly in favor of belladonna as a cure for idiopathic erysipelas, especially when affecting the face. He also remarks its prompt action in acute nasal catarrh with profuse watery secretion, and in ordinary sore throat. He advises giving five drops of the tincture as a first dose and repeating with one or two drops every hour. Hughes regards belladonna as displaying wonderful powers in catarrhal throat affections.

NUX VOMICA FOR SICK HEADACHE.

Tincture of nux vomica also appears, according to Ringer, to be possessed of real curative powers, when given in drop doses, repeated every five or ten minutes for eight or ten doses and then continued at longer intervals, for "sick headache" accompanied with acute gastric catarrh, whether due to error in diet, constipation, or no apparent cause. He regards it, administered in small and frequently repeated doses, as useful in many disturbances of the gastric function.

Many other medicinal agents are mentioned by Ringer, Bartholow, and other writers, as being valuable and reliable in small and frequently repeated doses, in the treatment of various disorders. My friend, Dr. Geo. H. Fox, has informed me that he has witnessed decided beneficial effects from the use of the small doses of pulsatilla in painful menstruation. Many of us have no doubt long been familiar with the use of small doses of castor oil in certain forms of diarrhœa in children. An every-day practice, that has become so common as perhaps not to attract our attention to the fact, is the large use of mineral waters for the cure of various dyspeptic and renal complaints. Here the actual dose of the supposed remedial salts has been shown to be quite small, the only one taken in any appreciable quantity being chloride of sodium, of which we use more in our daily food than is contained in a pint of most mineral waters.

Dr. Edward Vanderpoel, in an article on strychnia in tetanus and hydrophobia, published in the *Medical and Surgical Reporter* of May 7, 1870, refers to eight cases of tetanus, seven traumatic and one idiopathic, coming under his care, which he cured with rather large doses of strychnia, giving $\frac{1}{8}$ to $\frac{1}{2}$ of a grain every two hours until relaxation of the muscles took place, when the interval was extended to every six hours. He states that he published full reports of these cases in the *New York Journal of Medicine*, Nov. and Jan. Nos. for 1846 and 1847.

If I am asked to explain on what principle these small doses act in certain diseases, I reply, on the principle, so far as known, of actual experience(!) This is all we know about it. The homœopaths claim that it is explained by the law of similars, which is no law at all; and they pretend to make universal application of this so called law in the treatment of disease. Trousseau, and Bartholow following him, attribute to it a substitutive action, or, as the latter writer expresses it, the therapeutical action is the physiological antagonist of the disease action. It will, I think, be found that the necessity for the frequent repetition of the small dose will be in direct ratio to the acute or chronic character of the complaint. Hourly doses will be best indicated in acute cases both to impress the disease quickly and maintain the effect of the remedy; while in chronic cases a more chronic treatment is advisable.—*Druggists' Circular.*

Ammonia and water will often restore French gilt, if not too much worn off.

For Journal Materia Medica.

Therapeutic Hints.

BY W. C. BUCKLEY, M. D.

I have been, in the past few years in the habit of prescribing as alteratives, such articles as rumex, iris, lappa, inula, apocynum, corydalis, stillingia, chimaphila, phytolacca, gillenia, leptandra and others of similar characteristics in strumous affections.

I have prescribed them with the iodides frequently, and without them, and I am led to believe, that they, although *proscribed* by many physicians, and although many of them are consequently placed in the secondary class or list of articles in the U. S. Pharmacopœia, are in many instances of superior value.

Like iodide of potassium, arsenic, its preparations, and preparations of mercury, iron and some others, they frequently disagree with the stomach, and much care is necessary in their administration. During febrile excitement they are generally inadmissible, on account of the nausea and general disturbance of the stomach and of other parts, which they create. The fluid extracts of these preparations are generally well borne by the stomach, when the tongue is naturally clean. They are tolerated after anti-febrile and anti-bilious treatment had been premised. Pills of the solid extracts of such articles are tolerated, when the fluid extracts are inadmissible, particularly when combined with chologogues, laxatives and antacids. For example, podophyllin, soda exsic, irisin and phytolaccin, for syphilitic rheumatism with bilious complications. Stillingin or ext. stillingia with leptandrin, irisin and iodoform for syphilitic ulcers, when the stomach rejects potassium iodide, and the fluid extracts.

Infusions, although more inelegant, troublesome and bulky, may be used, when neither of the other preparations are tolerated. Elixir Iodo-Bromide of Calcium Comp. may be used to advantage in small doses frequently repeated, when larger doses of the same, and many other alterative preparations are objectionable on account of producing nausea and other stomach disturbances. In intermittent fever with scrofulous complications, irisin, gelseminum, and cinchonidia may be combined, and given in pills. In scrofulous diseases complicated with affections of the kidneys, stillingin with chimaphila, arctos. uva ursi and althea are useful, particularly when combined with iodide of potassium. When dropsy with scrofula is one of the complications, iodide of ammonium, with apocynum and gillenia trifoliata is very efficient as a diuretic, cathartic and absorbent. In diseases of

the lymphatic system, particularly when of a syphilitic character, the compound fluid extract of stillingia with iodide of potassium and phytolacca decandra will, I think, always be found far superior to sarsaparilla compound and iodide of potassium. I have used both—have often seen their comparative results.

Santonin.

In a short article on the use of this drug (*Med. Times and Gaz.*, July 7, 1877), Mr. E. Martlett Boddy says: there is no doubt that santonin is, for many reasons, by far the most efficient anthelmintic which can possibly be administered to children, and its combination with calomel he has found to be most advantageous in every respect. Santonin, like every other therapeutic agent, requires care in its administration; and if it is allowed to remain in the system it acts deleteriously, like certain cumulative medicines. This pernicious after-action one of course seeks as much as possible to obviate, and the only way to do so as regards santonin is to combine it with some purgative, such as calomel, to carry it off.

According to Falck of Marburg, if santonin is allowed to remain in the system we get a substance called xanthopsin, into which santonin is supposed to be transformed under certain circumstances which at present are not well ascertained. This xanthopsin is excreted by the urine, giving it a remarkable yellow color, causing a similitude to that secretion passed in jaundice, and its presence there is easily detected by caustic alkalies, which redden the urine. No doubt it is this xanthopsin which gives rise to those dangerous symptoms that have been so largely dilated on of late, and which many attribute to santonin only, forgetting or ignoring the presence of xanthopsin, and this mischievous action Mr. Boddy has found from experience to be entirely counteracted, or rather prevented, by administering calomel at the same time.

He says: I generally administer santonin combined with calomel, or I give it preceded and then followed by that drug; but one plan is as good as the other. The results of so giving this anthelmintic in either of these two modes have been most happy, and I have very seldom found it necessary to repeat the dose, for such treatment is thorough, and consequently precludes the necessity of repetition.

I myself have never had a case where convulsions or retention of urine have originated from santonin; in fact, I have never seen any untoward symptoms resulting from it in any way whatever, which I attribute to my combining it with calomel, or preceding and following it up by that purgative.

My experience has convinced me that nothing of a deleterious tendency can possibly accrue from santonin if it is combined with calomel, for by so doing we do not allow sufficient time to elapse for the xanthopsin to act on the system, for when the santonin has done its work the calomel removes it. The latter drug is a more searching purgative than castor oil: being likewise a chologogue, it causes a greater secretion of bile, which, as my readers know, is the natural purgative. Giving the santonin in one of these two methods aforementioned will entirely prevent all dangerous symptoms arising; there will be no convulsions or retention of urine: nor will that secretion appear like that found in jaundice, for this one simple reason: the santonin, when it has done its work, is eliminated from the system by the calomel, and consequently the poisoned xanthopsin has not sufficient time to form. Perhaps this substance is the cause of patients seeing objects either yellow or green in color.—*Monthly Abstract.—Druggists' Circular.*

The Dangers of Ether.

It has always seemed to us the height of folly to declare there could be no danger in any anæsthetic. The lesson taught by a late death from nitrous oxide, has it is to be hoped, been well learned, and we shall in future hear less of the absolute safety of any agent capable of depriving a person of all sensation. Some cases in which ether has been followed by alarming symptoms have lately been recorded. They have been termed syncope, but the word is not appropriate, as the heart continued to beat after respiration ceased. This is what should have been anticipated. When death is produced by ether the animal's heart continues to beat long after the arrest of respiration. The pulse is quickened by ether and maintains its force through a long state of anæsthesia. In these facts lies the safety of ether. But it should never be forgotten that there is danger at a certain stage, and the danger is from the side of the respiration, which at length ceases. Stertorous breathing proceeds from paresis of the muscles of the palate, and should lead to the ether being suspended. So respiration growing more and more shallow and less frequent is a warning, and should not be overlooked. It is very rare that the heart fails—perhaps never. Pallor is rare, too, and should

excite attention if it occur. But, we repeat, the danger of ether is from the side of respiration, that of chloroform from the heart, and this fact goes far to explain their relative safety. In chloroform narcosis the danger is much more sudden. Ether gives warning.—*The Druggists' Circular.*

On the Preparation of Neutral Tannate of Quinia.

This salt of quinia has been employed for some time, and forms a very eligible preparation, especially in the treatment of children, owing to its entire tastelessness. To obtain it, 1 part of quinia sulphate is dissolved in distilled water, by aid of sulphuric acid, and the quinia is precipitated by a solution of soda. The washed alkaloid is then dissolved in 10 parts of alcohol, spec. gr. 0.828, and the solution mixed on the water-bath with a sufficient quantity of warm water, just short of causing any separation of quinia.

In another porcelain capsule 3 parts of tannic acid are dissolved in 60 parts of distilled water, the quinia solution is very gradually, and under assiduous stirring, added to this, and the contents of the capsule are heated on the water-bath for about 15 minutes. The whole is then transferred to a filter; the precipitate is washed with warm water, until the filtrate runs off colorless and free from bitter or astringent taste, and *particularly*, until it ceases to become cloudy and cooling. The tannate of quinia remaining on the filter is then dried. The warm solution, which has drained from the precipitate, deposits on cooling a tannate of quinia, which has a very marked bitter taste. Acid tannate of quinia, namely, subjected to a thorough washing with boiling water, is converted into the neutral tannate, which remains upon the filter.—P. J. Haaxman, in *L'Union Pharm.*

Dietetic Medication.

A medical restaurant has been lately established in London, on the principle that diseases can generally be cured by a special system of diet, and that they are caused chiefly by improper food. On the entrance of a visitor, a physician asks him regarding his ailments. His meal is then prescribed, and he is allowed to eat no more than is presented to him. At the close he is dismissed to smoke a medicated cigar and to sip coffee, chamomile tea, or whatever other beverage may be considered advisable.—*Druggists' Circular.*

Monthly Summary.

Glycerole of Phosphorus.

Dr. Chas. Ménière criticises the method heretofore employed for preparing the glycerole of phosphorus, as being imperfect and unreliable. The method consisted in heating the glycerine and dissolving phosphorus in it. Frequently, however, there appears, when the solution cools, an opalescence and a deposit, which is due to a separation of phosphorus. To prevent this, he recommends to use phosphorus in a finely divided state, which may be obtained by mixing it with a substance soluble in glycerine itself. Sugar or gum-arabic are probably best adapted for this purpose. Either of these, in powder, is mixed with a little glycerine, to obtain a mixture of the consistency of honey. This is heated on the water-bath, the phosphorus is added, and intimately incorporated with it. Then the remainder of the glycerine is added, first in small quantities at a time, and care is taken that the temperature does not exceed 50° C. (122° F.). Dorvault in his *Officine* recommends to make a solution containing 0.10 gm. of glycerine. The author, however, thinks that Reveil's formula is preferable. This contains 0.10 gm. phosphorus in 1.000 gm. of glycerine, and is much better borne by the stomach, even in equivalent doses, than the former.—*Répert de Pharm.*, 1877, 354.—*New Remedies.*

Preparation of Emetia.

According to Lefort and Wurtz, the nitrate of emetia is so little soluble in water, that it may be made the starting-point for its separation from any fluid preparations of ipecac. A concentrated watery solution of the extract, or the fluid extract, previously deprived of alcohol, and concentrated, is mixed with a saturated solution of potassium or sodium nitrate, whereby a resinous mass is thrown down, which consists of nitrate of emetia. This is removed, washed with water, dissolved in alcohol, and the solution poured into milk of lime. The mixture is evaporated to dryness, powdered, and exhausted with ether, which, on evaporation, leaves behind the alkaloid, generally of a yellowish color. This is taken up by dilute sulphuric acid, and reprecipitated by ammonia, when it is obtained colorless. The authors have re-examined the constitution of the alkaloid, and find it to correspond to the formula: $C_{28}H_{40}N_2O_5$.—*Répert. de Pharm.*, 1877, 385.

Dangers from Santonine.

In using santonine it is well to bear in mind that comparatively small doses have produced convulsions of a somewhat grave character. A German contemporary lately reported a case in which poisonous effects were produced in a child two years old, by the ingestion of so small a dose as a grain and a half. Convulsions commenced in the face, and extended to the extremities, while the respiratory action was greatly impeded. Under warm baths, enemata, and artificial respiration, the patient recovered. The physician in charge of the case then instituted a series of experiments on the lower animals, and found that chloral and ether inhalations controlled the convulsions produced by santonine. He naturally argues that the same treatment should be pursued in the human subject when a poisonous dose is taken.—*The Medical Review.*

Contagiousness of Scarlet Fever.

Dr. Longhurst (*Lancet*), in answer to some questions regarding the contagious character and communicability of scarlet fever, writes that the period in which infection is most active is the stage of inflammatory fever up to the full developement of the eruption; that the intensity subsides with the subsidence of the fever; and that it is not during the stage of desquamation. That the media of communication are the vaporous exhalations from the skin and the breath affecting the surrounding atmosphere and the clothes That the patient may ordinarily safely rejoin the family circle at the end of the third week.—*Medical Record.*

Whooping-Cough.

English practitioners speak highly of the use of croton chloral in the treatment of whooping-cough. They claim that it has a marked tendency to shorten the duration of the disease. The dose for a child one year old is one grain every three or four hours.—*Medical Record.*

Dialyzed Oxide of Iron.

Liquid perchloride of iron, 30° B.....20 dr.
Ammonia, 22° .....7 "

Add the ammonia by small portions to the perchloride. The precipitate, at first, rapidly redissolves, but afterwards takes longer to disappear. The transparent liquor is then placed in a dialyzing apparatus, the distilled water there used being frequently changed. After a varying length of time, the highly-colored solution left in the dialyzer no longer precipitates nitrate of silver, loses all acid reaction, and is devoid of the usual ferruginous taste. The liquid always contains a small quantity of muriatic acid which can be detected by precipitating the oxide of iron with a slight excess of ammonia, filtering, then adding to the filtrate an excess of nitric acid, and lastly nitrate of silver. Two fluid drachms of the solution are evaporated to dryness, and the residue being weighed, enough distilled water is added to obtain a liquor containing one per cent. of the ferric compound.—*Druggists' Circular.*

Syrup of Tar.

Select wood tar..... 3 drachms.
Pine saw-dust..... 6 "
Distilled or rain water..... 25 ounces.
Sugar, sufficient.

Mix the tar with sawdust, and pour on it the water warmed to 140° F. Shake occasionally, and after two hours' contact, filter the liquor on the sugar, and make a syrup is a close vessel heated on a water-bath. The sugar should be in the proportion of 19 ounces for each 10 ounces of the filtrate.—*Druggists' Circular.*

Jaccoud on the Fœcal Origin of Typhoid Fever.

As the result of a most extensive study of typhoid fever, in which one hundred and six epidemics occurring in different parts of the world were analyzed, M. Jaccoud reaches the conclusion that fœcal matters engender the disease, but are not *typhogenic* unless they enclose the specific typhoid poison, which usually comes from the dejections of typhoid patients. There are circumstances, however, under which the fœcal matters are poisonous without having had any previous admixture of typhoid matters; in such cases the poison is elaborated in the fœcal matters, which themselves are, as before, merely the agents of transmission.—*Journal de Med.—Druggists' Circular.*

Nervous Prostration.

I enclose copy of a prescription from Dr. Andrews, of New York, which I think one of the best combinations I ever met with for nervous prostration, especially in nervous and debilitated females. (We call it "Andrews' Tonic"):

℞ Acid phosphorici dil.... 1 ounce.
Elix. calisaya.....4 ounces.
Elix. val. ammon.....2 ounces.
Glycerinæ .....3 ounces.
Vinum xericum .....6 ounces.

M. S. One-half to one ounce three or four times a day. H. G.—*New York Electic Med. & Surg. Jour.*

The Poison of Small Pox.

In the session of the French Academy of April 30th, Messrs. Pasteur and Joubert made an important communication on the nature of the poison of small pox (hæmorrhagic variety). They have succeeded in propagating the bacteria, which are contained in the blood during this disease, outside of the living organism, in "dead" liquids; and they found that their vitality remained unimpaired, even after repeated transplantation. Such an infected solution may be filtered by means of appropriate apparatus, and completely freed from bacteria, so as to become entirely inert. During the artificial propagation of these bacteria in clear solutions, no microscopic granulations appear to be formed, at least, even under the most powerful lens, no organized or amorphous substances can be traced outside of the bacteria. These facts make it highly probable that the poison of small-pox is a bacterion, and not a virus.—*Ber. d. Deutsch. Ch. G.*, 1877, 1171.

Slate Paper.

Prof. Marx, of Stuttgart, has originated an exceedingly handy method for preserving drawings or diagrams made with chalk upon a black surface for lecture purposes. It is frequently necessary to place figures or drawings upon the black-board, which have to be wiped off again, and have to be rewritten every time they are wanted. He has caused the firm of C. Lienhard, of Stuttgart (manufacturers of paper-hangings), to make an endless, dead-black paper, 1 metre wide, of which a piece of the necessary length is cut off and pinned upon a flat surface. When the drawing or writing is finished, the chalk is fixed upon the paper with a dilute solution of shellac made by dissolving 50 gm. of bleached shellac in 1 litre of alcohol of about 85 per cent., and filtering. This solution is applied by means of a spray apparatus. The chalk-marks disappear at first, but reappear on drying.—*New Remedies.*

Cossypium.

This is a drug about whose action there is a great deal of dispute; some claiming very decided oxytocic action for it, while others claim that it has no such action. In the few cases in which I have used it, I have been unable to see any effect whatever from it; but the evidence in its favor is of such a character that we must admit that it possesses some virtues. All preparations except those of the fresh green root, are claimed by those best qualified to judge, to be inert. The preparations of this drug, as we find them in the market, are too unreliable to be of use.—*Toledo Med. and Surg. Journ.*

To take Rust out of Steel.

Place the article in a bowl containing kerosene oil, or wrap the steel up in a soft cloth well saturated with kerosene; let it remain twenty-four hours, or longer; then scour the rusty spots with brickdust. If badly rusted, use salt wet with hot vinegar; after scouring, rinse every particle of brickdust or salt off with boiling water; dry thoroughly; then polish off with a clean flannel cloth and a little sweet oil.—*Dental Cosmos.*

Distribution of the Alkaloids in Cinchona Trees.

D. HOWARD:—The author has found that 'renewed' bark of *Cinchona succirubra*, and *C. officinalis*, and the root bark of the latter, contain much larger quantities of quinidia than the natural stem-bark. The receipt of a lot of recent Darjeeling barks, comprising root, stem, and branch bark *from the same trees*, enabled the author to compare the relative quantities of alkaloids. The root fibre was found to contain even a larger percentage of quinidia than the root itself.

Barks of Branch.	Stem.	Root.	Root-Fibre.
Total alkaloid...3.3	5.5	7.6	2.0
Composed of			
Quinia..... 23.5	20.2	11.5	13.0
Quinidia..... 0.6	0.6	2.9	11.4
Cinchonidia.... 25.3	23.6	19.9	11.7
Cinchonia..... 19.4	32.8	47 3	46.7
Amorphous.... 31.2	22.8	18.4	17.2

—*New Remedies.*

Michigan State Medical Society.

The Michigan State Medical Society at its recent meeting adopted the following expression of its opinion:

Whereas, There is a bill before Congress to remove the tariff on quinine; and

Whereas, By the tariff a few men are enabled to get up a corner on quinine and increase the price of that drug; and

Whereas, Especially the poor and the sick suffer when quinine is very expensive, as the consumer must pay for the drug, whatever the price, there being no reliable substitute for this extensively used therapeutic agent;

Resolved, That it is the sense of the Michigan State Medical Society that the bill to remove the tariff on quinine, now before Congress, should pass that body.

Resolved, That the Secretary be instructed to send a copy of these resolutions to the Senators and Representatives in Congress from this State. —*New Remedies.*

Pancreatin.

Pancreatic glands, freed from all extraneous matters, are to be macerated in double their weight of water, previously saturated with chloroform to arrest decomposition. After some time the mass is thrown on a strainer, the residue expressed and the resulting liquids mixed. These are rapidly evaporated in a current of air in large shallow dishes at a temperature not exceeding 45° C. (113° F.).

Ten centigrammes (0.10 gm.) of pancreatin, added to 5 gm. of fibrin in 25 gm. of water, and heated at 50° C. (122° F.) dissolve and transform it completely. The filtered solution should at most only show a faint cloudiness on adding nitric acid. 10 centigrammes (0.10 gm.) of pancreatin, added to 100 gm. of starch paste (containing 5 gm. starch) give a liquid, which runs rapidly through a filter and is capable of reducing four times its volume of Fehling's standard solution.—*New Remedies.*

Transparent Gout-Paper.

Tissue paper is covered with a solution of 1 part of amber-lac and 6 parts of benzoin; when dry the following is applied: Euphorbium, 30 parts; cantharides, 15 parts; stronger alcohol, 300 parts; digest three days, filter, and add Venice turpentine, resin, and pitch, of each 15 parts. If necessary, this solution may be diluted with some more strong alcohol, and should be applied with a broad brush

Another formula is: Cantharides 15, euphorbium 4, strong alcohol, 240 parts; digest a few days, filter, and add pitch 180; dissolve with a gentle heat, and add Venice turpentine 6 parts, and enough tar to color the mixture brown. This is spread two or three times upon tissue-paper by means of a sponge, and when dry, the back of the paper is coated with oil of lavender.—*New Remedies.*

Oxalate of Cerium in Obstinate Vomiting.

Dr. Peters, reports four cases of obstinate vomiting, associated with different forms of disease, all of which had been benefited in a very striking manner by the use of large doses of oxalate of cerium, after an almost endless variety of measures had been unsuccessfully employed. In one of them—a case of cancer of the stomach—the oxalate was administered in the dose of four grains every two hours while the patient was awake, and continued until probably six hundred grains were taken within three weeks, not only without inconvenience, but with such marked benefit that food was taken and retained with comparative comfort.—*The Medical Review.*

Treatment of Hydrophobia by Oxygen.

A girl, seven years of age, was bitten by a rabid dog. The wound, which involved the subcutaneous cellular tissue, was at once cauterized with nitrate of silver, and healed completely in seven days. The child had suffered three months previously from diphtheria, which had left a paralytic aphonia. When the wound had healed the child became very excitable. Seventeen days later dyspnœa suddenly manifested itself. The inspirations were free, but expiration was difficult and interrupted. Deglutition was almost impossible. Neither urine nor fæces were passed for forty-eight hours. The child inhaled three cubic feet of oxygen, which relieved the symptoms in two hours and a half. The next day a more severe attack occured, with spasm of the muscles of the back and limbs, spasmodic respiration, and complete insensibility. These symptoms were again removed in three quarters of an hour by the inhalation of oxygen. The slight dyspnœa which remained was treated in the same manner with oxygen for ten days, and the child made a complete recovery, with the aid of the monobromate of camphor, which was continued for two weeks.—*Louis. Med. News.*

People who have implicit faith in the "cure all" recipes which are preciously handed to one or another of their neighbors, or are treasured within the covers of that "rare" volume, labeled the "family physician," while deriving small comfort might yet imbibe a useful lesson from the perusal of the following:

12 grains-each of Lactate of Iron,
Citrate of Iron,
Strychnia,
Sulphate of Quinine.

Make 12 powders. Take one every 4 hours.

This is an exact copy of a recipe handed to one of our city druggists by an intelligent and careful citizen, who copied it from a "Doctor Book." The *only* mistake consisted in writing the "Citrate of Iron and Strychnia" on two lines and leaving out the "and." A suspicion in the mind of the druggist that 1 gr. of Strychnia was "too big" a dose, was all that prevented a funeral.—*Toledo Med. and Surg. Jour.*

Benzoated Zinc Ointment.

C. K. (*New York*) writes *Druggists Circular*, that he has succeeded in making in a short time a very fine ointment, by triturating the oxide with the tincture of benzoin until dry, and adding by portions the ointment body. This was the first time he had made the ointment in that manner.

Effervescing Carbonate of Iron. (DR. T. SKINNER.)

Acid tart	ʒ iij.
Sod. bicarb	ʒ v.
Ferri sulphas	ʒ x.
Pulv. sacch. alb	ʒ i. ʒ vi.
Acid, citric	ʒ ij.

Mix the finely powdered dry material as follows: First, the sulphate of iron with the sugar and part of the tartaric acid; secondly, the citric acid with the remainder of the tartaric acid and the bicarbonate. Stir the two mixtures together and unite by sifting. Finally, granulate in open metal vessel over a water bath.—*New York Eclectic Med. & Surg. Jour.*

Croup.

After several years' experience with it, I offer the following as the very best remedy for croup. I always keep it made up, ready to take along at a moment's notice:

℞	Oil Stillingia	1 drachm.
	Oil Cajeput	1 "
	Oil Lobelia	½ "
	Oil Lavender	½ "
	Oil Cinnamon	10 drops.
	Alcohol	1 ounce. M.

As soon as the croupal cough is noticed, rub a small quantity on the throat; repeat every hour or two, as long as necessary. If the case is a very bad one, give one or two drops on sugar every few hours. Since I commenced to use the above, I have found no other treatment necessary in any case of croup.—*Ibid.*

A New Remedy for Whooping Cough.

Lasinski, in a recent exchange, highly recommends insufflation of the following powder in whooping-cough:

℞	Quinine sulph. gramme	1.0 grs. 15.
	Acidi salicylici gramm.	2.0 grs. 30.
	Sacch. albi.	
	Natr. bicarb. aa gramme	.6 grs. 7.5.

M.

He uses the powder morning and evening, and makes it last ten days, that is, nearly one grain of quinine and two of salicylic acid are used in each insufflation. He confesses that children make resistance, but claims that the results are so favorable that it is worth while to persist. Distinct action of the medicines appears at latest eight days after commencement of their use, and is shown by a quantitative or qualitative diminution of the attacks. The experience of the author in twenty cases has been that a complete arrest of the whooping cough takes place in between eight and thirty days; adults and older children, were more amenable to treatment than quite young children. His method of procedure with children is to have them held in the lap of an assistant while a tongue spatula armed with a blow-pipe carrying the powder is inserted; during one of the deep inspirations which follow crying and gagging the operator blows the powder down. Care is taken to depress the base of the tongue well and to direct the end of the blow-pipe behind the epiglottis.—*Ibid.*

Pil. Cochliæ.

Pulv. aloes socot	℔ ss
Pulv. aloes Cape	℔ ss
Pulv. rad jalapæ	ʒ iv
Pulv. gambogiæ	ʒ iij
Pulv. colocynth	ʒ iv
Pulv. sapon, Castil	ʒ iv
Ol. caryoph	ʒ ss
Syr. rhamn	q. s.

Ut. ft. pill mass.—*Ibid.*

In dyspepsia of long standing and considerable accompanying flatulence, the following recipe taken, and then omitted for a month or two and again taken, will, I think, be found of great value:

℞	Acid. hydro-cyan (dil)	48 drops.
	Bismuth sub nit	100 grains.
	Tinc. cascarillæ	1 ounce.
	Infus. "	15 ounces.

M. S. Shake well, and take a tablespoonful three times daily, before meals.—*Ibid.*

Whooping-Cough.

℞	Croton-chloral-hydrate	40 grains.
	Tinct. belladonnæ	½ ounce.
	Syrup pruni virg	5½ ounces.

M. Teaspoonful three times a day for a child five years of age; to be increased or diminished with the exigencies of the case, the persistency of the attack, the age of the patient, etc.—*Ibid.*

For Chronic Bronchitis.

The administration of the following has been attended with a fair amount of relief in this class of cases:

℞.	Oleum lini	ij oz.
	Mucilagi acaciæ	ijss "
	Syr. Tolu	j "
	Ol. terebinth	iij dr.
	Aqua cinnamoni, ad	vij oz.

M. S. ʒ ss three times a day.
—*Druggists' Circular.*

EDITORIAL.

The Late Prof. A. B. Crosby.

At a meeting of the Faculty of the Bellevue Hospital Medical College, held Aug. 10, 1877, on motion it was unanimously

Resolved, That this Faculty humbly bow in submission, but with saddened hearts, to the Almighty, who in His inscrutable Providence, has suddenly stricken down in the meridian of his career one of its most gifted and beloved members, ALPHEUS B. CROSBY.

Resolvd, That in this visitation it has lost one of its most cultured, lucid, impressive and brilliant lecturers; one who, in imparting his valuable lessons, made study a pleasure by combining with his wealth of learning an aptitude of illustration, mingled with wit and humor, that crowded his class-room with enthusiastic and admiring scholars.

Resolved, That the members of the Faculty mourn the loss of one of their most accomplished and genial colleagues, one whose presence at their official and social reunions was always hailed with delight.

Resolved, That in his death we feel that Bellevue Hospital has been bereaved of one of its most skilled and faithful surgeons, the medical profession of one of its most eminent practitioners, the country of one of its noblest citizens, who, both in war and in peace, contributed his talents and energies with patriotic zeal in its behalf.

Resolved, That we offer our sincere sympathy to his wife and family in this trying ordeal; that while we are powerless to assuage their grief, we commend them to the sweet memories of his useful life, and to the tender mercies of Him in whom he trusted, who "has gone before."

ISAAC E. TAYLOR, M. D., *President.*
A. FLINT, Jr., M. D., *Secretary.*

Exophthalmic Goitre successfully treated by the Iodo-Bromide of Calcium.

BY C. H. GUPTILL, M. D., Elliot, Me.

SEPT. 22, 1872, was called to visit Mary G., unmaried, æt. 45, who had been under the care of a respectable physician for one year, and had been treated for anæmia and nervous troubles regarded as the result of long confinement as a seamstress. She received no benefit from the treatment, chiefly tonic. I found her much emaciated; very excitable; bowels constipated; appetite poor; urine scanty and high colored; pulse very rapid and small, often could not be counted; heart's action felt over a large area; breathing labored, and muscles of neck enlarged, tending to rigidity; veins of face and neck congested; the thyroid gland was much enlarged, and this first alarmed the family. She had intolerable headaches; the face was that peculiar to exophthalmic goitre; the eyeballs very prominent giving a wild stare and a larger look to the eye than natural. I had seen in thirty years of practice only one similar case. I prescribed Trousseau's treatment, viz., digitalis, which after a fair trial proved ineffectual; gelsemium and Fowler's solution were then successively used, but without benefit; anodynes for the headaches only aggravated the conditions present; nervines were useless in their turn; stimulants made matters worse. About three months and a half after taking charge of this case, new features appeared. Induration presented itself of the abdominal muscles, also of the thighs and legs. At this time I was led to prescribe the Iodo-Bromide of Calcium in the form of solution—one half a teaspoonful in water morn, neon, and eve. The indurated portions were also bathed with the same. Under this treatment my patient at once improved. The heart's action became more quiet. The nervous excitement calmed, the appetite returned, the patient gained strength. Soon she was able to leave her bed. The thyroid gland lessened in size, and in six months became natural. Soon my constant services were not required, and my visits became occasional only. Miss G. is now in very good health. I have, however, to say that she is not able to do without the medicine. If she omits its use for some weeks her symptoms return. She becomes excitable, and resorts to the remedy always with success.

I regard the Iodo-Bromide of Calcium as a very valuable addition to our therapeutical list. It is a decided sedative, as I have seen in other cases. It is an efficient alterative, and is well calculated to meet many conditions where a sedative, alterative, and tonic treatment is required. The effect is very satisfactory where nervous irritability and debility are conjoined with a peculiar cachexia, as seen, for instance, in exophthalmic goitre.—*American Jour. of the Med. Sciences.*

We republish the above at the request of a correspondent.

Diphtherine and Iodo in Diphtheria.

Cases by Dr. J. M. WOODWORTH, Mayersville, Miss., Aug. 18, 1877.

Messrs. TILDEN & Co.,

I received the box you were kind enough to promptly forward me in response to my urgent request for remedies in Diphtheria. The Diphtherine, and Elixir Iodo,

as well as the Bromo-Chloralum were a God-send; that night, I was summoned to a boy of 13 years, a very well marked case of diphtheria. I was very anxious as to this case, as nearly all who have been attacked here have died. The third day my patient was out of danger, thanks to your remedies. Three more children in the same family were taken, aged eleven, nine and six years, all severe cases with large amount of membranous deposit in the throat, high fever, glands badly swollen, and irritable condition of the stomach. I treated these in same manner; all recovered. I have since treated seven cases with like success. I am as much surprised as my friends and patients, and say I can only give these remedies the credit, the one for the throat, and the other for constitutional treatment, as recommended by Dr. Bayles. I write in much haste, and will give you other cases soon.

Another letter. Aug., 22nd.

As I promised, I now mention I have treated successfully, six more children with very violent symptoms of Diphtheria; in all, the cases yielded to the Diphtherine and Elixir Iodo. I gave the vegetable cathartic pill of the Eclectic Pharm. with Veratrum and Gelseminum, and applied a thin slice of fat pork, well sprinkled with capsicum, to the outside of the throat. I saved a whole family by this treatment. I regard it as a constitutional disease, and to be treated as such; your Iodo successfully neutralizes the poison, and the Diphtherine dissolves the accumulating membrane, and removes the inflammation.

I am sure the Profession will use it generally, as soon its value is known for, there is no single disease we so much dread in a community.

Under date, Aug. 31.—Dr. W. writes:—

"Send me two bottles of Diphtherine and three bottles of Elixir Iodo by Express immediately. I am still quite successful with the use of these remedies, and out of twelve or thirteen cases, have lost only one child, less than a year old, by Diphtheria.

I have now eight or nine cases under treatment, all colored children, and fear I shall not succeed so well as it is difficult to make them gargle and they resist the swabbing of the throat which is indispensable."

Elixir Iodo-Bromide of Calcium Comp., in a Case of Lupus of 10 years' standing.

From "Star of the West" Cincinnati, Aug. 9, 1877.

MICHIGAN.—Letter from Rev. W. J. CHAPLIN.—I am just home from Dayton, Ill., where my nephew, Rev. A. H. Laing and myself held a grove meeting last Sunday. The day was very pleasant and our meeting was a success. So well were the friends pleased that another was solicited and an appointment made for Sheridan on the third Sunday of the present month, which occurs on the 19th inst. We shall no doubt have a very large gathering if the day should prove fair.

I am just up from a severe and long continued illness which came near proving fatal. For several weeks the physicians gave my friends no promise of my recovery. But I am now able to commence work again in a limited way.

It is known to most of my friends that during the last twelve years I have been much troubled with a cancerous sore on my nose and face. I have had treatment several times with little success. The "cancer doctors," as a certain class of specialists are termed, all agreed that I had cancer, and must be treated soon, or it would be too late. I submitted to several "treatments" which were torturous almost beyond endurance with no benefit. I then called upon eminent physicians of Chicago and other places, who pronounced my affliction *Lupus Exedens*, and said I had been maltreated. I finally got hold of Tilden's *Bromo-Chloralum* which worked so well that I corresponded with Mr. Tilden, and have since been taking his remedies with excellent results. I am still under treatment which is not painful, but slowly eradicating the poison from my system. I advise all who are afflicted with cancer or lupus to try Tilden's remedies without fail. Correspond with him at New Lebanon, N. Y. I know of several "cancer doctors" who are driving quite a business by curing cancer without pain for large fees, who use Tilden's remedies exclusively! Yours in haste, W. J. CHAPLIN.

Otorrhœa.

Boonville, Ind., May 15th, 1877.

Messrs. Tilden & Co.—

Gentlemen, I desire to report to you a case of Otorrhœa, in which the efficacy of your Iodo-Bromide of Calcium Comp. was sufficiently proven.

Was called to examine a girl of twelve years of age, having a very offensive discharge from internal ear of right side, with considerable deafness in affected ear. This disease had been of several years standing, at times getting better; various remedies had been tried with but temporary relief. I first used carbolic acid and astringent injection with little, if any, success. Having a small amount of your Sol. Iodo-Bromide of Calcium Comp. I commenced using it as an injection, (diluted sufficiently) with marked benefit. This giving out, I again resorted to astringents and carbolic acid injections. The case seemed to progress slowly, the offensive discharge continuing. I then ordered the Elixir Iodo Bromide of Calcium Comp. internally, and the Solution sufficiently diluted, as an injection. In three days there was marked improvement, and in one week the offensive discharge had entirely disappeared. There was some irritation on

the external ear probably caused by the Solution used as injection. Fearing the discharge had been checked too suddenly, I applied a blister behind the ear, discontinuing the Solution but continuing the Elixir internally. No bad consequences resulted, and now after twelve months there has been no return of the affection.

Respectfully, T. E. BENNETT, M. D.

Hip Joint Disease Cured with the Elixir Iodo.

We were visited last week by JAS. CALKINS, of Sand Lake, Renn. Co., N. Y., a young man 20 years of age. His case was a Scrofulous affection of the hip, and called Hip Disease by the many physicians who had attended him. He had been afflicted several years and much of the time confined to his bed, with four large abscesses.

He states, that he commenced the use of the Iodo two years ago, when he procured a bottle and took it with considerable relief; the discharges lessened and the sores finally healed. Its persistent use for two years has resulted in a cure, and he is now able to go around with a cane, though one limb is three inches shorter than the other. He washed the ulcers with Bromo-Chloralum.

The experience he gives is very similar to that of others. He began with small doses and gradually increased to nearly one ounce a day. The appetite at once improved, his food digested well and he gained rapidly in flesh; the discharges ceased and the abscesses healed.

J. P. F. BRUNNER, M. D., Topton, Berks Co., Pa.

Of late I have prescribed the Iodo-Bromide of Calcium Compound, in a variety of cutaneous diseases, and find that it gives admirable results, by using it a moderate length of time. I treated two cases of long standing Psoriasis, which had been under treatment of other physicians for some time, without deriving any benefit. I generally use the Solution internally, and find that its virtue is enhanced by combining Liquor Potass. Arsenitis. I prescribe it in the following manner:

℞. Sol. Iodo-Bromide Calcium Comp. fd. ℥ i.
Liquor Potassi Arsenitis fd. ʒ iii.
Sympus Simplex
Aqua Font. *aa* fd. ℥ ii.

M. Sig. Teaspoonful three times a day after meals.

Extract from letter of C. C. V. CRAWFORD, M. D., Village Green, Delaware Co., Penn., Sept. 6, 1877.

Gentlemen:—I have used your "Elixir Iodo-Bromide of Calcium Comp." for several years, and have derived so much satisfaction in my practice therefrom, as to fully warrant me in placing it in my small list of remedies—"*Reliable.*"

It rarely disappoints me when appropriately used in cases it is fitted to relieve.

Please forward me Dr. Bayles' essay on Diphtheria. From whom in Philadelphia can all your preparations be obtained as wanted."

Extract from letter of F. W. WATSON, M. D., Davis, Macomb Co., Mich., Aug. 25, '77.

"Your Elixir Iodo is a tip-top alterative, and your Firwein with adjuvant treatment has cured a case of Pneumonia in the second stage."

W. A. CHARTER, M. D., of Lost Creek, Harrison Co., W. Va., under date Aug. 22nd, writes as follows:

"I can say nothing but in praise of the Journal. I find nothing as practical for the same money. It is anxiously looked for and eagerly perused each month, more especially since assuming its new garb for 1877. I am now delighted with its style and solid contents.

Your Elixir of Iodo-Bromide of Calcium Comp'd, I've been using regularly for three years, and have tried it in a variety of Blood Diseases, and can truthfully say when the Iodo fails, I despair of success. I recollect one case of inveterate chronic ulcers of legs, which indicated true disease and prospected for an early amputation, that after other means had been used in vain, immediately commenced improving upon the use of Iodo, and to day is healed up and appears well; all that was used besides the Iodo, was external bandaging to support the weakened blood vessels."

Yours Respectfully, W. A. CHARTER, M. D.

Extract from letter of J. C. MUNDAY, M. D., Lake Charles, La., Aug. 8, 1877.

"I find the Journal of Materia Medica an indispensable *vade mecum* of medical literature; one that I do not intend to be without under any circumstances whatever. I am using the Elixir Iodo, and Bromo-Chloralum externally, in my practice, and find the more I prescribe them the more I am induced to do so from the good effects obtained in each and every case. I regard the Iodo as the most positive and sure Alterative ever brought to the notice of the profession, not only in cases of a scrofulous diathesis, but in all blood impurities and impoverishment, hepatic congestion and Chronic Malaria Toxæmia. In diphtheria, sore throat and scarlet fever, as a local application I want nothing more positive and certain in its speedy

action, than the Bromo-Chloralum, and as a disinfectant and deodorizing agent it really supersedes anything I have ever tried."

Extract from letter of Dr. P. A. CASHOW, Dresden, Weakley Co., Tenn., Aug. 4, '77.

"The Journal comes regularly and always has something new. I have used your Fluid Extracts and like them better than any others, especially your Fluid Ergot. I have been using your Bromo-Chloralum in nasal catarrh. It corrects all offensive odor, lessens the discharge, and has a better effect than any other remedy—As a disinfectant for foul ulcers and in the sick room it excels all others having no offensive odor itself."

Extract from letter of B. STORCK, M. D., Milan, Erie Co., Ohio, Aug. 27, 1877.

"I look with pleasure to the coming of the Journal and consider its *reliable, practical* contents of fully as much value to the practicing physician as the contents of most of the expensive medical journals."

Firwein.

DR. MARTIN, of San Francisco, writes: Aug. 23, 1877. "Firwein is one of the most valuable articles it has been my great fortune to use. I thought your proposition that it would reduce the mortality of consumption one-half, rather extravagant, but my experience will more than sustain it. Many persons come here with consumption, or are rather sent here, and into other latitudes for a *change*, which change often means, that they are sent here to die. I have had several cases of this kind on hand; and am pleased to say they have been benefited by its use, and I hope they will go back substantially cured.

It works admirably in conjunction with your Elixir Iodo in Scrofulous cases, and they should be used together."

Extract from letter of G. S. HANNAFORD, M. D., Readville, Kennebec Co., Me., Aug. 20, '77.

"I have used your Firwein and Elixir Iodo with marked success."

Bromo-Chloralum in Sore Throat.

Extract from letter of Rev. W. A. BROADHURST, Clarksville, Tenn., Aug. 22, '77.

"I have worked hard at my profession, preaching the gospel, and last year I was first troubled with sore throat, and have since been almost a constant sufferer. I have used your Bromo-Chloralum freely, and have derived great benefit from it. I am now using internally your Iodo."

Extract from letter of H. O. DUNHAM, M. D., Beaver Creek, Bond Co., Ill., Sept. 4, 1877.

"I take pleasure in adding my testimony to the efficacy of your preparations. The Bromo-Chloralum is the best disinfectant, deodorizer and antiseptic that I have ever used. I have also found your Fl. Ext. Ergot of great benefit. You are working wonders in the medical profession."

Importance of the Swelling of the Extremeties in the Course of Variola.

At the end of his career, the venerable Sydenham said he never saw heal a case of variola, when on the eleventh day of the malady the salivation is not followed by tumefaction of the hands and feet.

Such a sentence has been fully confirmed in the case of a young man affected with a semi-confluent variola, in the service of *Dr. Trousseau*, Hotel-Dieu, Paris.

This patient when first seen, was in the sixth day of the malady. The salivation appeared as a constant phenomenon, towards the eleventh day—it soon yielded, but the swelling, whose absence has been signalized *fatal* by Sydenham, did not appear at the extremeties.

Notwithstanding his efforts, the patient died.

Respectfully Yours, H. ROBERI M. D.

Washington, La., Aug. 4, 1877.

Corpulence—Treated without Starvation;—or How to get lean.

The above is the title of a very readable pamphlet published by M. M. GRIFFITH, M. D., of Parsons, Luzerne Co., Pa., in which the subject of obesity is very ably treated—its causes, mode of prevention, &c., fully discussed, and valuable hygienic rules laid down which, if strictly followed, will tend to greatly decrease what many feel to be not the least of human ills.

The pamphlet is very neatly printed—comprises 79 pages, and may be procured by application to the author.

Price, 50 cents, sent by mail.

☞Correspondents will oblige by writing plainly their *names, Town, County and State.* We are frequently unable to answer letters because these are omitted.

THE
JOURNAL OF MATERIA MEDICA,
A Monthly Journal Devoted to
MATERIA MEDICA, PHARMACY, CHEMISTRY,
AND NEW REMEDIES.

New Series.] October 15, 1877. [Vol. XVI.—No. 10.

Gelseminum Sempervirens—Its Value as a Therapeutic Agent.

BY W. H. ARMSTRONG, M. D., DALLAS, TEXAS.

(*Continued from September Number.*)

Read before the Dallas City Medical and Snrgical Association, and published in accordance with resolution.

The treatment of Remittent Fever resolves itself into a very simple matter; administer gelseminum in order to reduce fever, then quinine, and purgatives if necessary and the giant is subdued, the patient rarely having a second paroxysm. In order to show the marvelous rapidity with which this drug reduces fever heat, I will instance a few cases. Was called to see an infant 6 months old. Temperature, 107° F., with all the aggravated concomitants of such an excessive degree of heat. Gave Gelseminum in drop doses every hour, and in three hours the temperature fell to the normal standard. In the case of an adult with Remittent Fever; found patient delirious; excessive pain in the head and back, disposition to cramps, carotids throbbing so violently that the head was shaken at each pulsation. Temperature 106° F. Gave 15 drops Gelseminum with $\frac{1}{3}$gr. morphia, and in $\frac{3}{4}$ of an hour, temperature fell to 103° F., the body bathed in a profuse sweat, and the patient expressing himself as feeling all right. Was called to see a child, age 11 mo., had been suffering with chills for some weeks which merged into the remittent form. It had a convulsion before I saw it, skin bluish, great tendency to spasms. Temperature 105° F. Gave 2 drops Fl. E. G., and in a short time its body was covered with profuse perspiration. Its abdomen which was excessively hot when I first saw it, became pleasant to the touch, and in 2 hours the temperature fell to 99° F. But why multiply cases; the history of one is the history of them all, and in the large number of cases of Remittent Fever treated by me, I can recall but one in which I failed to reduce the fever speedily. I had no Tildens' Fl. Ext. of G. with me: the exacerbation lasted 36 hours, in spite of the cold bath and quinine and purgatives. Now some may inquire, does not the morphine bring about these good results? I frequently associate the Morphine and Gelseminum when much pain is present, in the case of adults, but in the case of young children I never employ an opiate, the decrescence of temperature being as rapid in either case, and in the case just mentioned in which the paroxysm was so lengthy, I exhibited the morphine with no appreciable result other than to relieve the existing pain. Though its good effect is more marked in the malarial, in the early stage of pythogenetic fever, it subserves a useful purpose, relieving excitement and rendering the patient more quiet, but exerting no material influence upon the temperature. The great indication for the employment of the drug, is the flushed face, bright eye and contracted pupil; where these co-exist, no matter what the disease may be, Gelsem. is of service. In the latter stages of Typhoid Fever we have the dilated pupil, the lack-lustre eye, the lax and not a tense condition of the system; hence its employment is contraindicated. I have used it with marked benefit in measles. It does not reduce the pyrexia, but soothes the patient and conciliates sleep and wards off complications.

Congestion, the most frequent and fatal complication of the malady, is prevented and if present, is subdued, the action of the skin promoted and the prompt appearance of the eruption favored. Its effect is at once apparent when there is much congestion of the brain, a condition frequently seen in the stage of invasion. In scarlatina it acts well, its tendency to the skin, making it especially valuable in this disease. In Pneumonia, it exhibits great therapeutic value, allaying the restlessness that accompanies the disease. As an arterial sedative it is more powerful than aconite, and more certain than digitalis; veratrum will reduce the frequency of the pulse but will not always mit-

igate the fever. Gelseminum moderates the fever and consequently controls the pulse. It is safer than digitalis because not cumulative; more manageable than veratrum; extreme prostration often follows the use of the latter before the attendants perceive its influence, while the Gel. gives subjective as well as objective indications of its influence. Veratrum rather retards convalesence in Pneumonia, while Gelsem. favors a return to health, veratum ties up the storm, gelsem. disarms it of destructive force. But its happy effect in pneumonia is not attributable alone to its sedative virtues, but is largely due to its direct action upon the inflammatory condition of the blood. The generally accepted theory of the state of the blood in this disease is that fibrin predominates, rendering the circulating fluid too plastic, too coagulable; hence the mercurial and alkaline treatment, in order to defibrinate. Now, in recent autopsies performed in cases where persons have died from an over-dose of the drug, it has been found that the blood is much more fluid and less coagulable than in its normal condition, the very result sought in the treatment of Pneumonia. The dose should not exceed 5 drops, in the case of an adult every 4 hours, to be discontinued when double vision comes on, or to be given in lesser quantity. Without nervous irritation, there is no appreciable pain in disease. Gelseminum will remove this factor, especially if it be malarial. This action is well displayed in its control of neuralgia of the trifacial: large doses are here required.

In acute suppression of the menses, the patient complains of burning sensations in various parts of the body, the face becomes flushed, head-ache present, and also slight febrile disturbance; there is a feeling of unrest. This condition is promptly relieved by the exhibition of the Gelsem., and the catamenial flow restored. In those irritable conditions of the bladder, so frequently met with in women, dependent upon the altered chemistry of urine, and increased sensibility of the cystic walls; where there is a desire to urinate every few moments, accompanied by a scalding, burning sensation up on the passage of urine, Gelsem. acts promptly. In such cases the doses should be small, say 4 or 5 drops combined with Pot. Brom., and repeated every 3 hours until relief is obtained, or its physiological action upon the eye ensues. I have met with this condition in persons suffering with rheumatic complaints, and it always yields to the above combination. It is spoken highly of in chordee: have not used it myself in this distressing condition, but from the action of the drug, would employ it with the expectation of immediate result. In infantile convulsions, whether dependent upon febrile disturbance or the so called reflex action, it may be used with the positive assurance of success. Ringer has recently demonstrated the fact, that it exerts a powerful influence upon the spinal cord, the seat of reflex action. Chloroform will relieve the convulsion more speedily, but its action is evanescent, and always attended with more or less danger, and unpleasant sequelæ often follow its use. Hence the hyper-cautious physician may dilly-dally with the cold affusion, warm bath and Pot. Brom., and the patient dies. But having a remedy of such potency, and withal so gentle and manageable in its action as the Gelsem., he has no fears of a bad result, and but little doubt of its success.

In hysterical convulsions it acts promptly, and often succeeds after morphia, chloral &c., fail. It should be given in decided doses; not less than 10 drops will effect any immediate result. In every disease, no matter what the name may be, if relaxation, diaphoresis, reduction of temperature is desirable, Gelseminum is the remedy: of course, its effects must be watched, nor must it be employed in ataxic conditions of the system; here stimulants and tonics are demanded. Combined with morphia, it makes a better preparation than the famous Battley's sedative, and patients who will not tolerate opiates alone, suffer no unpleasant sensations, when the drug is combined with the Gelseminum: no definite doses can be stated; this will vary with the age of the patient and the result to be accomplished.

In the foregoing paper, I have given the results of my experience with the drug, extending over the space of a number of years, not going into a detailed statement of the cases from which these conclusions are reached; and I feel confident that such will be the result in the hands of every practitioner, who gives this drug a fair and impartial trial. A good article must be employed, and I do not hesitate to endorse Tilden's Fluid Extract of Gelsem. as reliable and trustworthy. I have used it in all my cases. The true place of a drug is not determined by one nor two nor several physicians, but by the concurrent verdict of the profession at large. Laying aside prejudice and preconceived theories, its effects must be watched when employed alone, and judgment rendered on results thus obtained. I have been led to publish this paper for the reason that literature upon the drug is scant, at least, as far as I have seen, and with the hope of drawing out the experience of others. "Every man," says Lord Bacon, "owes this

debt to his profession, not only to attempt the mastery of what is known, but to add something to its already magnificent proportions."

Lectures on Diseases of the Heart.

By Austin Flint, M. D.,

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[Reported for The Medical Record.]

Lecture II.

SYMPTOMATIC PHENOMENA ACCOMPANYING ORGANIC LESIONS AT THE AORTIC ORIFICE; ENLARGEMENT OF THE HEART.

Gentlemen:—To day we will study the symptomatic phenomena following lesions at the aortic orifice. These lesions are aortic obstruction or aortic regurgitation, or both combined. In the first place, what is the effect produced upon the heart itself by these lesions? They lead first to hypertrophy and then dilatation of the left ventricle. We have in this specimen a very good illustration of the effect produced upon the left ventricle by organic lesions affecting the aortic valves. There is, as you see, a contracted and rigid condition of the valves, the walls of the left ventricle are hypertrophied, its cavity is dilated, and the dilatation evidently predominates. It is probable that there was present during life evidence of both aortic obstruction and aortic regurgitation.

Now what were the symptomatic phenomena probably afforded by such a case as this? A patient is more likely to be conscious of undue force of the heart's action when the left ventricle is hypertrophied than when the ventricular hypertrophy affects the right side of the heart. It is not uncommon, therefore, for persons having aortic lesions and hypertrophy of the left ventricle to complain of suffering from increased force of the heart's action, and direct the attention of the physician especially to that symptom. It is frequently the only occasion for consulting the physician. Lesions at the aortic orifice do not, for a considerable period, lead to the production of dyspnœa. So long as the hypertrophy predominates over the dilatation there is usually no complaint of difficulty of breathing; but when dilatation begins to predominate over hypertrophy, the patient is conscious of an undefined sense of oppression, which is referred to the præcordium. It is not exactly dyspnœa; it is rather an indefinite feeling of distress and discomfort. This fact will lead you to make the necessary physical examination to determine whether cardiac disease is present, and, when made, the physical signs of aortic obstruction or regurgitation, or both, are found.

We will now suppose that the disease progresses, that the dilatation becomes greater and greater, yet these patients rarely have dropsy.

Dilatation of the left ventricle, in itself, never leads to dropsy. It may occur in the course of disease resulting from left ventricular enlargement; but as a general statement, if the lesions are confined to the aortic orifice, and their enlargement by dilatation is chiefly in the left ventricle, we do not have dropsy. The patients suffer more and more of this indefinite discomfort referable to the præcordia, and by and by this increases beyond that degree which is expressed by such terms as discomfort or sense of oppression. Upon taking active exercise, or from the influence of mental emotion, etc., the heart's action is unduly increased, and what is the result, assuming that the left ventricle is dilated? This cavity becomes filled with blood and its walls have not sufficient power to empty it fully.

Now the patient is in a certain amount of danger; the distress is very great, and there is a feeling of impending death. This is the condition of the heart, which involves the liability to sudden death. When sudden death occurs from heart disease, the lesions, as a rule, are aortic, and especially involve regurgitation.

When, therefore, we have evidence of abundant regurgitation at the aortic orifice, and dilatation of the left ventricle, we must alwalys consider that the patient is in more or less danger of sudden death. This is a common termination, unless death is due to some intercurrent affection. We do not have dropsy or dyspnœa, or any distinctive and marked affection of the nervous system, or the digestive system, but there is danger of sudden death from over-exercise. The cause of the sudden death is paralysis of the left ventricle from over-distention. It is easy to understand how this takes place.

As a rule, patients with mitral lesions do not die suddenly. The common idea is that all persons having disease of the heart are especially liable to sudden death. But that is true only with regard to aortic lesions involving free regurgitation.

What effects upon the circulation, as shown by the pulse, do aortic lesions produce? They are usually well marked. In proportion as we have aortic obstruction it is very obvious that we should have a feeble pulse. Aortic obstruction is of much less frequent occurrence than aortic regurgitation, and the effect produced upon the pulse by the latter is quite characteristic. The characteristic features have been re-

cognized for a long time, and the pulse has been designated by a variety of terms. It is the pulse of unfilled arteries. We have two currents of blood coming together, and the effect of that is to give a *jerking* character to the pulse, and that term is perhaps as expressive as any other which has been used. The artery strikes the finger with a certain degree of force, although it is not forcible. The quickness of the stroke gives an impression of force, and when the stroke is made the artery appears to recede immediately. In situations where arteries of some size can be seen, for example, in the neck, the vessel seems, at each pulsation, to move over a greater space than normal, and the movement is quick, as if the stroke was instantly received.

Of course, you are not to confine yourselves to this symptom in making a diagnosis, although it is highly characteristic. This peculiar jerking character of the pulse as recognized by the touch is supported by the tracings of the sphygmograph. There are so many difficulties attending the practical application of this instrument, however, that I will not now stop to give it reference. These are the more important diagnostic or symptomatic phenomena which stand in relation to organic lesions at the aortic orifice.

I would say with regard to the urine—and it is an important point—that in *mitral* lesions, which involve more or less general congestion throughout the system, it is very common to find evidence of a certain amount of albumen as the result of a congested condition of the kidneys. It does not necessarily indicate any disease of these organs beyond the congested state in which all the organs of the body to a greater or less degree are placed. The amount of albumen is always slight. If there is a considerable quantity of albumen present in the urine, it may be regarded as evidence of something more than mere congestion of the kidneys. We do not expect to find casts of the uriniferous tubules which constitute important evidence of renal disease under other circumstances.

I may mention one point in regard to the urine which has relation to organic disease of the heart in general, but more especially to mitral lesions. The peculiar distress attending aortic lesions gives the impression to the patient of sudden death in some instances, but not in all.

In mitral lesions, however, even when there is considerable embarrassment of respiration and dyspnœa, the patients, as a rule, are not very anxious with regard to their condition. There is remarkable difference in cases of organic disease and cases of purely functional disease of the heart, in respect to purely mental effects.

As a rule, patients who have a purely functional disturbance of the heart, have great mental disturbance; whereas, in patients with mitral lesions, and suffering more or less from dyspnœa, with a frequent, feeble, and perhaps irregular pulse, there is an entire absence of the anxiety and apprehension present with functional disease. I am not able to explain why such differences should exist, but it is a well-established clinical fact.

ENLARGEMENT OF THE HEART.

Before proceeding to consider enlargement of the heart, I must state certain anatomical points which are necessary to be borne in mind relating to the boundaries of the præcordia. The præcordia is divided into two portions, according to the relation which it has to the lungs. In a portion of the præcordia the heart is in contact with the walls of the chest; in the remaining portion the heart is covered with lung. These two portions of the præcordia are known by the terms, deep and superficial cardiac spaces. The superficial cardiac space is that in which the heart is uncovered with lung; the deep cardiac space is that portion of the præcordia in which the heart is covered with lung. It is desirable that you should recollect the boundaries of the superficial cardiac space, and the rule for finding them is the following. This rule is not absolutely correct, but it is sufficiently so for all practical purposes.

If you take a point in the median line, on the sternum, on a level with the costal cartilage of the fourth rib, and draw an oblique line from that point to the situation of the apex beat in the fifth intercostal space, and regard it as the hypothenuse of a right-angled triangle, you have with sufficient accuracy by such triangle marked out the boundaries of the superficial cardiac space. This is not exactly accurate, because the anterior border of the left lung, as it covers the heart, does not make a perfect oblique line between the two points given, but it answers all practical purposes.

The normal situation of the apex-beat must also be recollected. As a general rule, it is found in the fifth intercostal space, and a little within a vertical line through the nipple. This is the position normally occupied by the apex-beat, assuming that the person is sitting or standing. In the recumbent posture the apex-beat may rise as high as the fourth intercostal space, and there are occasional cases in which it can be felt at that point while the person is in the upright posture.

Practically speaking, the base of the heart is at the second intercostal space near the sternum. In reality this is just above the base, but it is in this situation that the sounds produced at the aortic and pulmonic orifice are best studied, either in health or disease. You now have the upper and lower boundaries of the space in the chest occupied by the heart, its base and apex, and in addition it is important to memorize the two lateral boundaries of the organ. The right lateral boundary is represented by a vertical line situated about a fingers's breadth to the right of the right margin of the sternum. The left lateral boundary is at or a little within a vertical line passing through the nipple.

These boundaries also are not strictly accurate for all cases, for the bulk of the heart varies within certain limits in healthy persons. They approximate accuracy, however, sufficiently for all practical purposes.

We have now studied the physical signs which represent valvular lesions of the heart, and the symptoms which are associated with organic lesions at the mitral and aortic orifice. In our study we have had occasion to say that organic lesions at the mitral or aortic orifice do not directly lead to grave results. They lead to grave results only indirectly, and the intermediate condition is enlargement of the heart; first, by hypertrophy, and second, by dilatation. Still farther, the enlargement by hypertrophy is, comparatively, unattended by grave consequences. The hypertrophy compensates for the difficulties interposed in the circulation arising from the valvular lesion. It is the dilatation which more especially, and chiefly, stands in relation to the important events and symptoms observed in connection with organic disease of the heart.

I have not spoken of the means by which we determine whether hypertrophy or dilatation of the heart is present, and it is to the consideration of that topic that I shall next direct your attention.

The questions are: What are the means by which we determine whether enlargement of the heart is present? Having determined its presence, what are the means by which we determine the degree and kind of enlargement? I shall not dwell upon these questions to-day, but shall consider them somewhat in detail at the next lecture. A few points, however, will be referred to in connection with the case before us, which is said to be a very good illustra of enlargement of the heart.

In the first place, the situation of the base of the heart, in cases of enlargement, is but little, or not at all, changed. The increased space occupied by the heart is, therefore, downward and to the left and right. The increase, however, is much more towards the left than towards the right, even when the cardiac enlargement is very great. In a case of enlargement, then, we may expect to find the apex-beat lower than natural, and carried more or less to the left; the distance in each instance being affected by the degree to which the organ has been increased in size, and the part of the heart in which the enlargement predominates. When the enlargement predominates on the left side of the heart, other things being equal, the apex-beat is lowered without being carried far to the left; whereas, if the increase in size be mainly upon the right side of the heart, the apex-beat is carried more to the left than downward. The first thing, then, to be determined in examining a given case, suspected to have enlargement of the heart, is to ascertain what relation the apex-beat has to the normal position.

If you will look at the anterior part of the chest of the patient before you, the impulse of the heart can be seen, as is not infrequently the case. You will also notice that there are several points, in the neighborhood of the apex, at which there is a visible pulsation. This also is nothing uncommon, and there may be an impulse from the apex to the base in each intercostal space. Under such circumstances, unless due care is taken, there is a liability to error in determining the exact situation of the apex-beat. We may have a strong impulse above and a weaker impulse below, and if your attention is not attracted to that point, you may say, "Here is the apex," whereas it would be not at the situation of the upper and stronger impulse, but below or above, as the case may be.

The lowest impulse is frequently weak as compared with the impulse above, and it is for this reason that when the heart is enlarged, especially in the left ventricle, the form of the apex undergoes considerable change, and the result is that the impulse at the apex is weak, whereas the impulse produced by the heart is strong.

You will then find the lowest impulse, which, in this case, is in the sixth intercostal space, and about one-half an inch to the left of a vertical line passing through the nipple. The heart in this case occupies an increased space downward and to the left, and the extent to which it is lowered and carried to the left is a very good criterion as to the degree of enlargement; the enlargement here being well-marked, but not extensive.

In the next place, in enlargement of the heart, the præcordial dullness will be increased in area and increased in degree. Why do we get this

increased dullness, both in area and in degree?

It is because, in proportion as the heart is enlarged, it uncovers itself and pushes away the anterior border of the left lung. The amount of increased superficial cardiac space thus obtained carries with it an increased degree of cardiac dullness corresponding to the amount of lung removed. As we percuss over the præcordia in this case, it is easy to determine that the area of dullness is increased, and when we compare it with the dullness obtained by percussing in the same region in a healthy chest, it is readily perceived that the dullness is increased in degree. These are all the means necessary to be employed to enable us to determine whether enlargement of the heart is present, and they are very simple in character and easy of application.

Now, as to the kind of enlargement. Which predominates, the hypertrophy or the dilatation? This question, also, is very easily settled. What are the points by which it is determined?

First, we have the evidence afforded by palpation. For, in proportion as hypertrophy predominates over dilatation, the action of the ventricles is strong, and in proportion as dilatation exceeds hypertrophy, the cardiac impulse is weak. As I apply my hand to the præcordial region in this case, it receives a strong heaving impulse, communicated through the thoracic walls. This alone is, as a general rule, quite a certain means of determining whether, in the enlargement, it is the hypertrophy or the dilatation that predominates. There is, however, another and more sure method of answering this question, and that is by means of the stethoscope. Place the instrument over the heart and determine what is the character of the first sound. In proportion as the heart is hypertrophied, we have the first sound intensified; all its characters are more marked than in the normal sound. In proportion as the dilatation pedominates over the hypertrophy, we have the first sound divested of all its distinctive characters, and it has acquired the valvular, clicking character. In some cases the second sound of the heart may be even louder than the first. In this case the first sound is intensified and is booming in character. We have, then, evidence of enlargement of the heart, and also of the degree and kind of enlargement. To complete the case, let us determine whether this patient has enlargement associated with valvular lesion. There is such lesion, as evidenced by the presence of an aortic direct and mitral regurgitant murmur. The subject of enlargement of the heart will be farther considered at our next lecture.

Lecture III.

Enlargement of the Heart (continued)—Treatment of Valvular Lesions.

Gentlemen:—At the close of the last lecture we were considering the subject of enlargement of the heart, and the means by which its presence is ascertained. I gave you the rules for determining the boundaries of the superficial cardiac space, and also the boundaries of the heart itself. I also spoke of the direction in which you were particularly to look for enlargement, namely, downward and to the left, and spoke of the means by which you would be able to determine the degrees and kind of enlargement. The fact of enlargement and the degree is determined, as you may recollect, first by finding the apex-beat wherever it may be. Its normal position is in the fifth intercostal space, and a little within a vertical line passing through the nipple. The effect of enlargement is to lower the apex and carry it to the left. It may be lowered to the sixth, seventh, eighth, or even as low as the tenth intercostal space, and, at the same time, carried more or less to the left. You will please to bear in mind what was said with reference to overlooking the apex-beat, and considering an impulse above as denoting its situation. For, when there is considerable cardiac enlargement, we may have an impulse in all the intercostal spaces between the base and apex. Removal of the apex-beat slightly to the *left* may be due to hydroperitoneum, gastric tympanites, pregnancy, etc., but none of these causes produce *lowering* of the apex-beat. The lowering of the apex-beat and its removal to the left are very good criteria for determining the fact and degree of cardiac enlargement.

Another mode of determining the degree of enlargement is by finding how much the area of the superficial cardiac space is increased; and that is ascertained by percussion. In certain cases in which the chest is thickly covered with adipose, or the mammary gland is excessively developed, percussion is not as valuable a means for this purpose as auscultation of the voice. For instance, you will place the stethoscope upon the upper part of the chest and get the vocal resonance; then move the instrument downward, getting the vocal resonance each time it is moved, until you find it abruptly ceasing or greatly diminished, when you may be sure that you have reached the border of the lung.

We have then, in proportion to the amount of enlargement, the superficial cardiac space increased in area, as shown by percussion and

auscultation of the voice; and, as far as percussion goes, there is increased degree of dullness as compared with health.

By what means are we to determine, in case of enlargement of the heart, whether the hypertrophy or the dilatation predominates? Reference has already been made to this question, but it is not improper to again allude to the means employed, because of the important bearing which the answer to the question has upon prognosis and treatment. We determine first by palpation; that is, by the strength of the impulse given to the hand, as it is placed over the præcordium. In some cases, in which the hypertrophy of the ventricular wall is the leading element, the ventricular contraction is so strong that the heart can almost be held in the hand at each cardiac pulsation. We can judge of the strength of the muscular contraction of the organ by the sense of touch.

Another mode is to direct your attention to the strength of the first sound of the heart. For, in proportion as the heart is enlarged by hypertrophy, is the first sound prolonged and louder, and the booming quality is more marked than in health. In proportion as dilatation predominates, the muscular walls of the organ are weakened and the first sound is feeble; not infrequently weaker than the second sound, and at the same time is shorter. The booming quality is lost, and in place we have the same quality that belongs to the second sound; that is, it is valvular in character. There are other points which might be mentioned in this connection, but these may be sufficient for practical purposes if they are well employed.

TREATMENT OF VALVULAR LESIONS.

I will now ask your attention to the treatment of valvular lesions, with and without enlargement of the heart. We frequently find in practice evidence of valvular lesions either without, or with only very slight cardiac enlargement. What are the indications for treatment in cases in which valvular lesions are present, but have not led to enlargement of the heart, or at most only very slightly, and that in the way of hypertrophy? *There are no special indications*, and that is an important statement. It is not infrequently the case, when valvular lesions of the heart are discovered, that the practitioner feels it to be a very serious matter, and that it must be met correspondiugly with injunctions regarding habits of life, and perhaps with regard to the use of remedies. There are certainly no indications for the use of the remedies with the view of removing the lesions. These must be accepted as they are; and yet I have known patients to be placed under treatment in consequence of the vague and irrational idea that remedies might have something to do with diminishing the valvular lesion. But are we to ignore the lesions altogether? Not altogether; we are to take into consideration the possibility and the probability that they will increase. Although there are no symptoms at present, indicating the existence of the trouble, and the lesion would not have been known, save by physical signs, the probabilities of increase of the lesion must be taken into consideration, and an endeavor made to forestall such increase, to render it as slow as possible. How shall this be done? We make the endeavor by giving certain directions which relate to the general regimen of the patient. In some instances, but this must needs be done with great discretion, it may be well to state to the patient that he has valvular lesion of the heart, as it may make him more considerate with reference to proper care for himself.

It is proper to advise this class of patients not to overtax the heart more than cannot be avoided, either by improper muscular exercise or great mental excitement. We should not go too far in our injunctions, as is too frequently done. It is not uncommon for physicians to overestimate the danger as regards the progress of the lesion, and to place restrictions upon the patient which are unnecessary, and which, perhaps, expose him to very great inconvenience. I will give you the rule which I have adopted in giving these patients general directions.

With regard to exercise and excitement, it is not only proper, but advisable to say that such amount of physical exertion should be made as can be done with entire comfort. The patient will receive no harm from muscular exercise, if it simply be limited by the sense of comfort. Muscular exercise which does not excite the action of the heart so as to occasion discomfort is to be indulged in, for it can be done with benefit. The same rule holds good with regard to mental excitement. All mental excitement, if possible, should be avoided which increases the action of the heart to such an extent as to give rise to a sense of discomfort.

As a general statement, the amount of enlargement of the heart, and the kind of enlargement, are to be considered as criteria of the importance of valvular lesions. But before enlargement has taken place, it is an interesting point of investigation to form some idea regarding the amount of valvular lesion. The murmurs give us no definite indication, for the intensity of the murmur has no relation to the amount of lesion. We may have an intense murmur with a very small lesion, and, on the

other hand, we may have a feeble murmur with a very extensive lesion. Is there any means by which we can obtain information concerning the degree of the valvular lesion, before the heart has become much enlarged?

We may obtain information by directing attention to the second sound of the heart as heard in the second intercostal space upon the left and right side of the sternum. Upon the right side of the sternum, in the second intercostal space, is the point where the aortic second sound is heard. The second sound heard in the second intercostal space on the left side of the sternum is produced mainly by the pulmonic valves.

The information regarding the degree of valvular lesion present is obtained by comparing the aortic second sound with the pulmonic second. First let us suppose we have evidence of valvular lesion at the aortic orifice, as shown by the presence of a direct or regurgitant murmur, or both. We wish to form an opinion as to whether much damage, if any, has been done to the aortic valves. We then compare the aortic second sound with the pulmonic second sound, and if it is found to stand in its normal relation with the pulmonic second sound, we may be sure that the amount of damage done to the aortic valves is not very great. In health the aortic second sound is somewhat louder, higher in pitch, and has more of the valvular quality, the short, clicking character, than does the pulmonic second sound. In proportion as the function of the valves is impaired by lesions, will the intensity of the sound be diminished, and if the aortic valves have undergone great damage the aortic second sound may be entirely wanting. We have then a ready way of determining to what extent damage has been done at the aortic valves.

Suppose we have mitral lesion, either obstructive or regurgitant, or both. We may form a judgment regarding the amount of regurgitation or obstruction by comparing the aortic second sound with the pulmonic second sound. In proportion as we have contraction of the mitral orifice, the left ventricle contracts upon an insufficient quantity of blood to fully dilate the aorta and its branches, the recoil of the arteries is less, the valves are expanded with less force, and there is a proportionate weakening of the aortic second sound as compared with the pulmonic. The effect, then of mitral obstructive lesion is to weaken the aortic second sound. If the mitral obstructive lesion has led to enlargement of the heart, we have seen that the right ventricle is the part especially hypertrophied, and the hypertrophy of the right ventricle is represented by the intensity of the pulmonic second sound. There is, then, with mitral direct lesion, involving contraction at the mitral orifice, an abnormal relation between the aortic second sound and the pulmonic second sound, consisting in a weakening of the aortic and an intensifying of the pulmonic, when hypertrophy of the right ventricle has taken place.

The same is true of mitral regurgitation. A less quantity of blood is sent to the aorta, the recoil of the artery is diminished, the valves are expanded with less force than normal, and, as a consequence, the aortic second sound is weakened; and when the right ventricle becomes hypertrophied, the pulmonic second sound becomes intensified.

This is of practical utility in forming a judgment with regard to the extent of the valvular lesions.

We have seen that the first effect produced by valvular lesions of the heart is to produce hypertrophy, and such hypertrophy is conservative; it has a real value and advantage. If it were practical to diminish the hypertrophied condition, the patient would be placed in a very much worse condition by so doing.

As a general statement, patients with valvular lesion of the heart do not suffer much inconvenience as long as the hypertrophy, which follows, predominates. A patient with hypertrophy of the heart predominating may take considerable muscular exercise with advantage, but he should carry it only to such an extent as he can do without suffering the least discomfort.

When, however, the dilatation predominates over the hypertrophy, the symptoms to which I called your attention in a previous lecture are developed—such as dyspnœa, first upon exertion, next when at rest, and general dropsy.

We will now assume that there is evidence of dilatation of the right ventricle; that the patient cannot take but little exercise without suffering from dyspnœa in an extreme degree, perhaps is unable to assume a recumbent posture, and there is cyanosis with more or less dropsy. What are the indications for treatment? The heart may be beating regularly or irregularly; different cases differing in this respect, without apparent reason for such difference. It is proper, if possible, to remove the dropsy. We usually endeavor to do this by the judicious use of hydragogue and diuretic remedies. In this way we may be able, perhaps, to relieve the patient of his dropsy.

We may also relieve the dyspnœa by the judicious use of certain measures. Opiates may

sometimes be resorted to, but very carefully. Some prescribe ethereal preparation, and these often afford marked relief.

We can hardly expect to relieve the patient of dyspnœa, especially upon exertion, as we may expect to succeed in removing the dropsy. However, these symptoms claim palliative measures of treatment.

Now, as regards the heart itself. We may often, under these circumstances, derive great benefit from the use of digitalis, especially when the heart is irregular in its action. A feeble, irregular action of the heart is the condition which is most likely to be benefited by the judicious use of digitalis. It is not necessary to carry it to very large doses; ten or fifteen drops of the tincture may be repeated at rather short intervals, the object being to keep up the *continuous* effect of the drug. The effect frequently in this class of cases is to produce regularity of the heart's action, diminish the frequency of the heart-beat, and increase its power, thus accomplishing the objects desired. Now, while this is being done, the great object of treatment, other than the relief of special symptoms, is to improve the condition of the blood by improving the general condition of the patient. In other words, our object is to put the system in such condition as will best tolerate an affection which must continue and increase. These patients, not infrequently, are anæmic, and this condition of the blood always increases their distress and suffering; in short, all the symptoms incident to cardiac disease. If we can restore the blood to its proper condition, perhaps the patient may tolerate the cardiac affection without much inconvenience. If anæmia is present, we endeavor to restore the blood to its proper condition, not only by the use of chalybeates, but by the use of such measures as will improve digestion, etc. The capital principle in the treatment of cardiac diseases is to endeavor to improve the general condition of the system, with the view of securing as much tolerance of the affection as possible.

TREATMENT OF AORTIC LESIONS.

I pass now to the treament of aortic lesions, which presents some points of difference as contrasted with the treatment of other cardiac lesions.

We do not have dyspnœa, we do not have dropsy unless enlargement by dilatation has extended to the right side of the heart. Hypertrophy and dilatation of the left side of the heart, dependent upon aortic lesions, do not lead to dyspnœa or general dropsy. They involve distress which is described as palpitation, or a sense of discomfort referable to the precordia. The suffering may be very great, but it is not, properly speaking, dyspnœa.

Now it has been stated that in cases of aortic lesions, especially involving free regurgitation, there is danger of sudden death, and that fact is to be considered in the treatment of this class of cases. Other things being equal, the danger of sudden death is in proportion to the regurgitation at the aortic orifice and weakening of the left ventricle by dilatation.

What can be done to relieve the distress of the patient and prevent a fatal termination?

We may have here, as with mitral lesions, a feeble, irregular action of the heart. Shall we employ digitalis, as in the treatment of the same condition in connection with mitral lesions? There is a difference of opinion with regard to the correct answer to this question. Some consider that this remedy may involve danger, and in this manner: if it has the effect of diminishing the frequency of the heart's action, over-filling of the left ventricle is more likely to occur; hence the patient is exposed to more danger from paralysis of the heart, and thereby sudden death. On the other hand, it is argued that by giving greater power to the heart's action, notwithstanding the diminished frequency, the patient is less liable to have over-accumulation of blood in the left ventricle. As far as my experience goes, the truth lies between the two extremes. I would use digitalis with a certain amount of reserve in the treatment of aortic lesions, but it seems to me evident that in certain cases benefit follows the judicious use of the remedy. We can give it without running the risk of producing much slowness in the heart's action, and thus secure the tonic effect of the remedy without incurring the danger which deters some from employing it at all. As regards other measures to be employed, the same general principle is applicable as in the treatment of other lesions. The general condition of the patient is to be improved as much as possible, especially with reference to anæmia. It has been justly said that "a lame heart needs good blood." Active muscular exercise or great mental excitement are to be especially avoided in aortic lesions in which there is evidence of free regurgitation at the aortic orifice, and evidence of dilatation of the left ventricle. Under those circumstances we should not hesitate to caution the patient, and perhaps it may not be imprudent in certain cases to intimidate the patient by telling him there is danger of sudden death unless certain prudential measures are observed.—*Medical Record.*

Typhoid Infection of Drinking Water.

Dr. E. V. Stoddard, of Rochester, presented certain questions bearing upon the subject, and cited facts which, seemingly, bear strong testimony as to their correctness. The statement of these questions in the form of propositions brings them most clearly forward.

Proposition I.—The decomposition of animal and vegetable organic substance is not, alone, sufficient to produce typhoid fever; for the development of essential typhoid, a special germ or element is necessary.

Proposition II.—The decomposition of animal organic substances is especially favorable for the germs of typhoid fever, and especially is this the case with human excreta.

Proposition III.—The pollution of water used for drinking and domestic purposes is one of the most fruitful sources of the development of typhoid fever.

In reponse to the question, "How does typhoid fever originate?" our first proposition offers a ready reply, and one which the daily accumulation of observed facts confirms. Two theories have been offered as explaining the development of this specific agent, the one holding that, to produce specific products, specific substances must be decomposed, and, to produce typhoid fever, the substances undergoing decomposition must be animal. The other claims that the origin of typhoid fever from decomposing substances can only occur when the products of such decomposition are mixed with, or contain, the specific typhoid poison. That typhoid fever is a specfic disease is now generally accepted. It is true there are yet those who argue strongly for the theory that it can be produced by the decomposition of animal substances *de novo*. But carefully conducted experiments have failed to corroborate this position, and in cases where outbreaks of this disease have occurred in unsanitary conditions and in the presence of decomposing organic matter, close observation has generally led to some starting point traceable to a focus of specific infection. The observation of every day is sufficient to demonstrate that the decomposition of organic substances, or of human or animal excreta, is not alone sufficient to produce typhoid fever. This is often observed in towns and cities with notably defective drainage and sewerage, where typhoid fever is very rare; and again, where want of cleanliness and abundance of filth exist in other cities, that there holds no constant relation between the prevalence of typhoid fever and the unsanitary conditions. Yet in such situations the introduction of a single case of typhoid fever has been sufficient to give rise to an extensive endemic. We are thus forced to recognize that there is an element essential to the production of typhoid fever, in addition to filth and organic decomposition.

With this view of the continuous production of typhoid fever, the question at once arises as to the character of the substance, or substances, which act as a means of transportation of the specfic exciting cause. Experience has clearly shown, that in other infectious diseases, especially in cholera, the specific poison occurs abundantly in the excrements of the patient. The same reasons as in cholera hold for seeking the poison of typhoid in the excreta.

In fresh typhoid evacuations its presence is not so evident; but if such dejections are allowed to remain in filthy surroundings, or especially when placed in the midst of putrescent or putrescible substances, the evolution of the poison seems to be certain and rapid. Thus observation indicates that, in the recent state, in order to become active, the germ needs to pass through a certain stage of development outside the body. It has also been observed that *soil* seems, at certain seasons, to afford conditions specially favorable for the development of the typhoid poison, and soil containing decomposing organic matter, and saturated with water, affords a welcome nidus for its development. The ease with which a well, or other supply of water, becomes polluted by surface drainage or leakage from sewer or privy, offers a ready explanation of the means of entry. The soil, permeated by water holding in solution or in suspension much organic matter, into which the germs of disease may have found entry, becomes a focus for propagation, as well as a means of contamination of the wells sunk in it.

As a very striking illustration of the questions raised, the history of the "Hunter Street Well," of this city, is in point.

During the past year, the attention of our Health Board was attracted to the fact that, in a certain limited section of the city, typhoid fever was remarkably prevalent, with a decided immunity elsewhere. Examination limited it to an area of about five acres. We at once suspected some local cause, and a thorough investigation was instituted. In the centre of this district was situated a well, at the intersection of Hunter and Reynolds Streets. The surroundings of this well were extremely filthy. About thirty feet distant was a privy, with a vault which was not water-tight.

On opening it, its walls were covered with

deposits from water percolating between the stones. The water of the well was clear and free from odor or taste.

The microscope showed no unusual amount of organic matter. Chemical analysis disclosed the presence of a considerable amount of the sodium chloride, but little else of importance. The presence of the sodium chloride pointed to sewage pollution, as proved to be the case.

To test the influence of the water upon those using it, it was decided to take a thorough census of all the families of this district, and ascertain the number of persons using the water; the number using that from any other source; the cases and character of illness, and the deaths during the previous six months, noting such other facts as would throw light upon the subject. This was thoroughly done, with the following result:

Eighty-seven families, consisting of 492 persons, occupy the district. Forty families, comprising 219 persons, *use water* from the well. Among those occurred twenty-three cases of typhoid fever and one of diphtheria during the period taken.

Forty-seven families, consisting of 273 persons, did *not* use the water; among these occurred only two cases of typhoid fever during the same period. Among those using the water, the ratio of sickness was one in every 9.12, among those not using the water one in 136.5, or fifteen times as much sickness from zymotic diseases among the families using the water. It was ascertained that the *first case of* typhoid in the district, during the time considered, *occurred in the family occupying the premises on which the well was located.* The well was immediately closed and *not another new case of typhoid* had *appeared* after two months, in this section.

These facts are exceedingly interesting, and point very directly to the conclusion:

First. That impure water alone did not produce typhoid fever, but only after a case had occurred in its immediate vicinity with probable infection. This is strengthend by the fact that only those using the water were sick, and the disease immediately disappeared on the closure of the well.

Second. That water yielding very moderate evidence of impurity to the senses, or by chemical or microscopical examination, by the *physiological* test is proven very dangerous.—*The Sanitarian.*

Engraving on Silver.—Cover the silver-plate with wax, engrave into the wax down to the metal pour nitric acid on the plate, allow the acid to corrode the metal, wash off and remove the wax.

On Dialysed Iron.

ALTHOUGH we have already published several formulæ for preparing dialysed iron, and have given a general account of its properties, we deem it nevertheless proper to make some further remarks on its composition and uses, particularly as we have permitted ourselves to print,* on the authority of Lebaigne and others, a statement respecting it which is not satisfactorily proven, and might be the cause of disappointments. Most of the circulars and notices of dialysed iron, namely, claim that "it may be used as an antidote for arsenic, as a substitute for the hydrated ferric oxide, its recommendations being the fact that it requires no further preparation, and is conveniently of administration." *It remains, however, to be clearly demonstrated whether dialysed iron is an effective antidote for arsenic; and before this fact is clearly proven, it should not be relied upon as such.* We think this subject of sufficient importance to be at once thoroughly investigated.

Ferric oxide, or sesquioxide of iron has the composition of Fe_2O_3, when anhydrous. In this condition it is soluble in acids only with great difficulty. There exist, however, quite a number of hydrates of this oxide, differing from each other only in the amount of water which they contain. Many of these hydrates are found in nature, as Limonite ($_2Fe_2O_3,H_2O$), Turgite ($_2Fe_2O_3,H_2O$), Xanthosiderite ($Fe_2O_3,_2H_2O$), Goethite (Fe_2O_3,H_2O), etc. Iron-rust is likewise a hydrated ferric-oxide, of the composition $Fe_2O_3 + Fe_2(HO)_6$, and always contains small quantities of ammonia.

The normal hydrated oxide ($Fe_2O_3,3H_2O$,) or $Fe_2(HO)_6$)* is produced by decomposing a dilute solution of ferric chloride or sulphate with ammonia, forming a light-brown voluminous precipitate, which is easily soluble, while still fresh, in dilute acids. Long-keeping, even under water, causes it to become crystalline and less readily soluble. Addition of glycerine, however, almost entirely prevents this change, and pulpy hydrated oxide of iron may be kept soluble almost indefinitely by means of this agent. If a large excess of ammonia had been used to precipitate it, it retains a portion of the ammonia even after washing with boiling water. On the other hand, if an insufficient quantity of ammonia was employed, the preciptate is in reality not hydrated ferric oxide, but rather a basic form of the employed salt. For instance, the precipitate produced in ferric sulphate by an insufficient amount of ammonia contains considerable quantities of sulphuric acid. Concentrated solutions of ferric acid salts, when precipitated

*June Number, pg. 182, 2d col., lines 9-13.

by ammonia, yield hydrates which contain less water than the normal oxide.

Under certain conditions the hydrated ferric oxide may be obtained in a soluble form. But this is in reality not the pure oxide, but a compound of it with a very small quantity of acid, that is, a basic salt. In other words, under certain conditions a small quantity of a neutral ferric salt (as chloride or sulphate) is capable of dissolving or retaining in solution a large quantity of ferric hydrate. Two such varieties of soluble ferric hydrate are known. One is the so-called *colloid hydrate*, and the other the soluble *metahydrate*. The former is obtained in the known manner by dialysing a solution of *ferric chloride* or *acetate*. The liquid finally remaining in the dialyser contains in the first case 98.5 per cent. ferric hydrate and 1.5 per cent. hydrochloric acid; and in the second case 94 per cent. ferric hydrate and 6 per cent. acetic acid. Both coagulate on addition of sulphuric acid, neutral salts, or alkalies, to a mass resembling a clot of blood, having the same properties as to solubility, etc., as the normal ferric hydrate. The soluble *metahydrate* is produced by heating, in a closed tube, a solution of ferric acetate to 100° C., or by boiling a very dilute solution of ferric chloride. In the case of the acetate the color changes from blood-red to brick-red, and the liquid is clear by transmitted light, but remarkably opalescent by reflected light. The precipitate which is produced in this latter solution by sulphuric acid, neutral salts or alkalies, is *insoluble* in concentrated acids, but easily *soluble* in water. On porous plates it dries to a shining varnish, the watery solution of which gives no iron reaction with potassium ferrocyanide. The different solubility in acids of the separated hydrates, and the behavior of the original solutions towards small quantities of ammonium chloride, whereby the colloid iron is immediately thrown down, while the metahydrate solution remains clear, distinguishes the two varieties of soluble ferric oxide.

The statement which we have repeatedly seen lately, that dyalysed iron is *entirely* freed from acid, is therefore erroneous. The hydrochloric acid, or chlorine, although not susceptible of being directly precipitated, is still present. It is only necessary to boil the dialysed iron with dilute nitric acid, to precipitate with sodium carbonate, and to add to the filtrate, acidified with a few drops of nitric acid, solution of silver nitrate, when the characteristic precipitate of silver chloride will make its appearance.—*New Remedies.*

The KEW HERBARIUM contains over a million of species of dried plants.

On the Sulphates of Quinidia and Cinchonidia.

The high price of quinia sulphate has induced many physicians to pay more attention to the therapeutical value of the other cheaper alkaloids of cinchona, and in consequence thereof the consumption of the latter has within the past year considerably increased. Among these alkaloids quinidia has been assigned the highest rank as to effectiveness, cinchonidia being but little inferior. There is, however, a good deal of confusion in the nomenclature of the cinchona alkaloids, especially among manufacturers, and particularly with respect to the alkaloids quinidia and cinchonidia. To clear up this doubt, and to draw the attention of pharmacists and physicians again to this matter, we here insert an account given by Mr. Bouchardat in *L' Union Pharm.*, 1877, 69.

Cinchonidia was discovered by Winckler in 1848;* its sulphate had been long known and designated as "sulphate of quinidia" by A. Delondre (who, together with O. Henri, discovered in 1833 the true alkaloid quinidia;† by F. Boudet and Bouchardat (who noticed its peculiar rotatory power);‡) and by German manufacturers of cinchona alkaloids. Pasteur§ demonstrated its isomerism with cinchonia and dispelled all uncertainty in regard to it.

The rotatory power of cinchonidia has since then been rigorously determined by Oudemans, and by G. Bouchardat (fils), upon the pure alkaloids, both of whom obtained exactly the same results.

Commercial sulphate of cinchonidia is often mixed with a small quantity of sulphate of quinidia, from which it has not been entirely separated in the course of manufacture.

Sulphate of *quinidia* is a much scarcer article in trade than the cinchonidia salt. It was extracted by Delondre and O. Henri from the yellowish solution remaining after the separation of quinia and cinchonia from Calisaya bark, which latter has, however, long ceased to be the principal source of this alkaloid.

Van Heijningen obtained it from the complex substance known as chinoidine, and gave to it the name of *B* quinine.**

Winckler extracted cinchonidia from a bark, which he found to have great resemblance to Huamali bark, as well as from Maracaïbo bark.

The same base exists also, in considerable quantities, in the barks which are gathered to the north of Bogotá, at Velez, Socorro, Pamplona, and Ocania. It is probable that these,

*Repert de Pharm., 48, 394. †Jour. de Pharm., 19, 628.
‡Jour. de Pharm., 23, 288. §Comptes Rend., 36, 26, 37, 110.
**Ann. d. Chem. u. Pharm., 72, 301.

or allied species, are identical with some of those now cultivated in Java or India.

According to de Vrij, the best source for the preparation of cinchonidia is the bark of *Cinchona succirubra*, cultivated in British India and upon Java. This bark is very rich in alkaloids, containing from 5 to 10 per cent. which corresponds to 25 to 50 grammes per pound; and among these cinchonidia is predominant. Mr. de Vrij has lately analyzed a red bark, containing as much as 10.27 per cent. of mixed alkaloids, among which 6.47 was cinchonidia.

In addition to this, a New Granada bark must be mentioned here, which is very rich in cinchonidia. Mr. E. Rampon states "that this bark has the same texture as *C. cordifolia*, but its external surface when stripped presents a rose, or a more or less red tint, very characteristic to a practised eye. This is the bark which Delondre and Bouchardat have figured and described in their quinology, under one of its forms as 'Rose-colored Carthagena Bark,' and under its other form as 'Red Mutis Bark.' Indeed, the larger pieces resemble those of red cinchona, but its texture and chemical composition is entirely different. This bark, against which much has been written in Germany, and the chief alkaloid of which was rejected, has later come into great favor. Indeed, cinchonidia is equally as effective as quinia. It has been much used abroad."

Bouchardat has employed cinchonidia as an antipyretic since 1856; Grisolle has likewise used it under its improper name, "*quinidia sulphate.*"

There is no further argument necessary to convince physicians of the equal therapeutical value of quinia and cinchonidia. The latter besides possesses the advantage that it is much cheaper than the former.

But it must be remembered that a good deal of cinchonidia sulphate is sold under the improper name of quinidia sulphate; and there are generally two grades of the latter quoted in price-lists: one as "quinidia sulphate I.," which is said to be tolerably pure: the other as "quinidia sulphate II.," which consists almost entirely of cinchonidia sulphate. In purchasing quinidia sulphate, therefore, it should be carefully examined, and, if it contain more than 3 per cent. of cinchonidia, it should be rejected. This amount of impurity is admissible for the sole reason that a further separation of the two bases so enhances the price of the product as to place it among the dear alkaloids.

It should, however, be added, that these distinctions between several grades of quinidia refer exclusively to that manufactured in Europe. So far as our knowledge and information goes, the American product is pure, and, we believe, may be used with confidence.—*New Remedies.*

Quinine Exanthem.

Prof. Köbner, of Breslau, reports the case of a large, powerfully built woman, 28 years of age, who was attacked with a syndrome closely resembling that of scarlet fever, whenever she took even a small dose of quinine. The symptoms consisted in a chill, which was sometimes repeated, a feeling of præcordial anxiety, nausea, vomiting, intense headache, high fever, and angina. A few hours after the chill an erythematous eruption made its appearance on the face, and spread rapidly over the entire body. It was attended by intense burning and itching, by slight œdema of the face, and injection of the conjunctiva. The color disappeared for a moment on pressure. The eruption on one occasion completely covered the entire body; on another it was confluent on the upper part of the body, but discrete on the legs. On this occasion the eruption on the legs was slightly papular, and the lower border of the confluent part was not sharp, but gradually faded into the healthy skin. After a variable length of time, according to the amount of quinine taken, the symptoms abated and desquamation began. The angina affected only the posterior wall of the pharynx, the soft palate and pillars being normal. Three times in the course of five months the patient was seized with these attacks. The first time, the exanthem broke out after 3½ grs. of quinine had been taken. As a diagnosis of scarlet fever was made, the quinine was continued for eight days, and the eruption persisted for the same length of time. Desquamation then began and continued for six weeks, and on the soles of the feet, in fact for nine weeks. The fever was high and persistent, and the prostration was very great.

Three months later the exanthem reappeared, after a dose of 2¼ grs. of quinine. The stage of eruption lasted four days, and the desquamation three weeks. The third time, the exanthem made its appearance after a dose of only 1½ gr. of quinine. The stage of eruption lasted only two and a half days, and the desquamation fourteen days. The affection this time ran a milder and shorter course than on the two previous occasions.

Dr. Von Heusinger, of Marburg, states that he has met with two cases, in which symptoms entirely analogous to those described above, were produced whenever even very small doses of quinine were administered. In these cases, however, the eruption was confined to the face. Both patients were women. One of them was at one time able to take quinine without inconvenience.—*Berliner Klinische Wochenschrift.*—*Medical Record.*

A Needle Found in the Brain.

At a meeting of the Pathological Society of Philadelphia, (*Med. Times*) Dr. H. Lenox Hodge reported, that upon removing the calvaria of a subject in the anatomical rooms of the University of Pennsylvania, a sewing needle of medium size was found lying on the right hemisphere of the brain, nearly parallel to the superior longitudinal sinus, about an inch distant from it, and about an inch and a half behind the frontal-parietal suture. The point and the eye of the needle were both unbroken. The point was directed backwards. The needle was much oxidized, and attached to the arachnoid surface of the dura mater by old bands of lymph near the larger extremity of the needle.

No history of the cadaver, an adult male could be obtained.

The needle appears to have given rise to no important changes, and had no apparent connection with the cause of death. The man seems to have died of phthisis.

It is a matter of interest how the needle reached this position. Other methods might be suggested, but it is most probable that it entered the anterior fontanelle during infancy, and thus passed to the place where it was found.

Dr. Hamilton Osgood asked what was the appearance of the needle.

Dr. Hodge replied that it was black and tarnished.

Dr. Sinkler thought it most likely that it had entered the fontanelle during infancy, as by no muscular contraction could it obtain the position in which it was found.

Dr. F. P. Henry said his experience went to show that instead of corrosion of needles long buried in animal tissue, there was an actual addition of new material. A short time ago he had removed with great difficulty a needle from the biceps muscle of a girl. It was three times the thickness of an ordinary needle, very rough and uneven, and covered with a hard mineral like deposit, to which was owing the increase in thickness.

Dr. Wilson recited the case of a sewing-girl who was said to have swallowed a paper of needles, many of which were removed from different parts of the body. These were all smooth, but blackened and tarnished. He had recently removed from the foot of a boy a needle which had been embedded four months. It was simply tarnished.

Dr. Sinkler had removed a needle from a foot after it had been there imbedded for three months. It was smooth and blackened, but not corroded. He placed it in his pocket-book, and on examining it after a few weeks he observed that the rusting process had taken place.

Dr. Richard A. Cleemann said that he had made use of the fact that a needle being imbedded in tissue for a certain length of time becomes tarnished. He had extracted a fragment of needle, and was anxious to determine whether it was all that entered the foot. The broken end was tarnished. He fractured the needle, and, observing that the fractured ends presented the usual steel like lustre, he concluded that he had removed the whole fragment. Had he broken it off, the fractured end of the removed portion would have been bright.—*Pacific Medical & Surgical Journal.*

Tincture of Nux Vomica, for Nausea and Vomiting in Pregnancy.

BY Q. C. SMITH, M. D., CLOVERDALE, CAL.

Having, some years ago, presumed to call the attention of the profession to the value of this remedy (for it is not new, or this application of it original with me), I would not dare to do so again, were it not that I noticed in a recent article from the pen of an eminent gynecologist, the following—the italics being mine: "Various remedies have been recommended which *occasionally* succeed (in relieving nausea and vomiting in pregnancy) but not unfrequently fail of affording the desired relief. I venture to report the following cases, in the hope that others may be induced to add chloral to the long list of drugs which *occasionally* afford relief to patients suffering from this most distressing symptom."

Now I do not doubt but that *chloral* is a good remedy for the trouble in question; but we must earnestly insist that Tincture of Nux Vomica, when administered as I shall hereinafter direct, is not a remedy that will only *occasionally* afford relief to patients suffering from nausea and vomiting in pregnancy: for experience has assured me that it will promptly relieve such cases, in the great *majority* of instances.

I usually administer the remedy about as follows:

℞. Tinct. Nucis Vom., Liq. Bismuthi, of each ½ oz. M.

Sig. Teaspoonful three or four times a day, a dose just after each meal.

In some very bad, neglected cases, it may be necessary for the patient to take a light breakfast in bed, for two or three days at the beginning of treatment.

During the last year, I have used, with gratifying success, the Granular Effervescent Citrate

of Bismuth, Pepsin and Strychnia. It has the advantage—an important one—of being quite pleasant to take; but probably it is not so efficient as the Tincture of Nux Vomica, as above directed.

Where the the patient is very fastidious as to *taste*, I sometimes administer Strychnia granules, one-twentieth of a grain three times a day, just after meals, with the desired effect.

In a few aggravated cases, not wishing to wait to see if the above-prescribed treatment would give relief, I have used the constant galvanic current with success, by applying one pole over the uterine region, and moving the other up and down the spine, and over the epigastric region, for fifteen minutes, just after each meal.

Certainly, with a well-directed use of the remedies I have mentioned, we will not only be able to "occasionally" relieve nausea and vomiting in pregnancy, but will surely be able to do so in almost every case, if not complicated with some organic disease.—*Pacific Medical & Surgical Journal.*

Electrolytic Treatment of Malignant Tumors.

Dr. George M. Beard, of New York, presents the following conclusions on the subject, as justified by experience up to the present date:

1. In all or nearly all cases the pain can be relieved, even in the latest stages.

This may be accomplished oftentimes by simple external galvanization without electrolysis.

2. In a certain proportion of cases, taken early, malignant growths may be temporarily or permanently arrested, so that patients are free from pain and from all severe annoyance, although the tumors are but little or not at all diminished in size. A number of cases of this kind have been under my care, and some of them are yet under my observation.

One case in particular I recall, of a lady who, for thirteen years, had carried what was supposed to be a cancer in the breast, which five years ago seemed to be taking a new start; but external galvanization alone appeared to arrest the progress of the malady, and the patient is living to-day, although the tumor exists and is not at all diminished in size.

In another case of malignant cystic of the breast, electrolysis caysed evacuation of the fluid and subsequent shrinkage of the tumor to about one-third of the original size, at which point it has remained for three years, causing, at the last accounts, no annoyance.

In cases like the above there is room for errors in diagnosis, and also the consideration that some tumors that prove to be malignant, even when not treated, are stationary for years, is to be noted. In the cases here referred to, however, there was no difference of judgment among the many surgeons who saw them, and in the latter case an operation was earnestly and unanimously advised.

3. Malignant cystics, like epithelioma, may be treated successfully, in many cases, by electrolysis of the base, the body of the tumor being neglected.—*Pacific Med. & Surg. Journal.*

Antagonism of Phthisis and Ague.

Dr. John Dudgeon, writing from Pekin to the *Glasgow Medical Journal*, says on this subject:

A certain antagonism has been supposed by some French surgeons in Algeria and some American writers, to exist between ague and phthisis. Where the one prevails the other is either absent or very rare; and certainly the observations made in China would seem to bear out this doctrine. Ague is very prevalent in the centre of China along the course of the great river Yangtse, which is, Nile-like, subject to periodical risings and over-flowings. It is also very common in the south, most probably the most frequently met with disease there. At Peking, the soil being sandy and absorbent, and there being little damp or marshy ground, ague in ordinary years is one of the rarest affections. The heat there is extreme for six weeks in summer, and the rain-fall is copious at that time. The streets of the city and parts of the surrounding country are frequently for days and weeks under water. During the great inundations of 1870 and following years in Chihli, ague rose to the first place in point of numbers. In Shanghai, from April, 1860, to July, 1861, 28,000 cases were seen; ten were for pulmonary consumption (seven were well marked), and 1400 were for ague. Tubercle is common, but is confined entirely to the abdominal organs. My experience at the capital all points towards the same conclusion. In Formosa, one practitioner disputes this antagonism, and notes forty-seven cases of phthisis in twelve months, and 718 cases of malarial disease. During the summer of 1872, he notes again 340 cases of intermittent fever, and 38 cases of chronic phthisis. At another part of the same island, during the same time, 20 cases of consumption were observed. It might, however, be a question, if malaria do not entirely neutralize it, does it not modify it? If so, this might account for the prevalence of the one, and comparative infrequency of the other. Or is this great immun-

ity from consumption (for such we must all admit) where ague is rife, to be accounted for on other grounds, such, for example, as that of heat alone, predisposing, according to a well known and fully recognized division of diseases, into abdominal and thoracic, the former predominating in the southern and hot, and the latter in the northern and colder regions?—*Pacific Med. & Surg. Journal*

Monthly Summary.

Microscopic Examination of Ground Coffee and Coffee Extract.

The samples were gathered indiscriminately from the grocer trade of New York City and Ann Arbor, Mich., and subjected to microscopical and chemical examination by Miss M. E. Johnson.

Ground Coffee contained—

No. 1, coffee, chicory, wheat.
2, coffee, chicory.
3, coffee, chicory, wheat, beans.
4, coffee, chicory.
5, coffee, chicory, wheat, beans.
6, coffee, chicory.

Coffee Essence contained—

No. 1, licorice root, wheat, beans.
2, chicory.
3, coffee, chicory.
4, chicory, burnt sugar.
5, coffee, chicory.

The manufacture of coffee extract suggests the question whether it may be made from unground coffee, with sale of the partly exhausted coffee berry. The exhaustion of unground cinnamon bark is well known, unbroken cinchona bark has been reported deprived of quinia and charged with chinoidin instead, and analysts are alert for finding spent tea. Hagar states that roasted coffee contains at the most 20 per cent. of soluble matter ("Untersuchungen," II, 613). Wanklyn quotes Vogel's report of 39 per cent. of soluble solids in roasted coffee, with the remark that it appears rather high. Hassal reports finding the extract of six samples, with an average of 28 per cent. and ranging from 23 to 30. In a single instance, that of a coffee purchased as Java in the roasted berry, and found not capable of making a satisfactory "cup of coffee," Miss Johnson determined the soluble matter, with several hours boiling, to be 17 per cent. Fictitious berries could not have been present, as a microscopic examination was made. In making coffee as a beverage, not over 10 or 12 per cent. of solids are usually dissolved. It is desirable that the average proportion of soluble matter should be better established, as a standard for analysis.

Dialysed Iron.

Preparations of iron have lately been brought forward which are said to possess important qualities, and are stated to be produced by dialysis. The French pharmacists led the way in this matter, and we have known their products for a long time. In this country the process has been employed for some time, and the solution sold without stating how it was made. In America also the preparations have at length been freely employed. Dialysed iron is precipitated by arsenic and by various salts. Sometimes a precipitate is produced on dilution with water. It is free from the unpleasant astringency of the chloride, and therefore often preferred. Graham, who first pointed out dialysed iron, showed that the muriatic acid passed through the membrane, and a colloidal ferric hydrate was left; but this was not free from chlorine, and the solution was regarded as that of an oxychloride. An aqueous solution of ferric chloride readily dissolves ferric hydrate. We now, therefore, only precipitate ferric chloride with ammonia, wash the precipitated hydrate, dissolve it in a solution of ferric chloride, and put the product in the dialyser, to obtain such a medicine as is desired. The iron solution separated from water by the membrane gradually loses its chlorine by the passage of a chlorinated compound through the parchment, and the result is a neutral solution, which is regarded as containing the peroxide. Dr. Weir Mitchell, in a late clinical lecture, spoke most highly of it. He gives it in larger doses than are usually employed, as, indeed, he does all chalybeates. This dialysed iron, containing twenty-four grains to the ounce, he gives by the drachm or half-ounce, while most authorities give thirty or forty minims, three times a day. It does not blacken the tube or affect the bowels.—*The Doctor*

The Acids of the Gastric Juice.

Mr Richet, of Paris, (*Gaz. Hebdomadaire*, July 27,) has instituted a series of experiments on the gastric juice, resulting in the discovery that it contains one or more free acids soluble in ether, and one or more insoluble in ether. On examination of the former, he concluded that the organic acid of the stomach, in chief, if not wholly, is the "sarcolatic" acid.—*Pacific Medical and Surg. Journ.*

Hints on Horse-shoeing.

A writer in the *Southern Medical Record* justly says that although this is not a medical topic, yet medical practitioners, more, perhaps, than any other class, need to know how a horse should be shod.

The length of time a shoe should be worn will, of course, depend upon the kind of work the horse is doing, and the sort of roads over which he travels.

In four to six weeks the hoof will have grown too large for the shoe, which will press inward upon the soft parts of the foot, and the horse will become lame. Before this occurs the shoe should be reset, or a new pair put on. As a general rule a saddle horse will ride better without corks on his shoes. The shoe should be made to fit the foot, and not the foot the shoe. It should rest firmly and uniformly upon the outer rim of the hoof, so as to require little or no rubbing off of the hoof by the rasp. Three nails on a side are enough, to be driven in with such inclination as to come out at a point about one and a half inches above, and yet so shallow as not to touch the quick. To know how to do this properly the smith must study the anatomy of the horse's foot. A small, tough nail, made to fit tightly the hole in the shoe, should be used, otherwise the shoe will soon become loose.

The frog in the foot may be lightly trimmed, so as to remove any jagged portions, but should not be cut or rasped off, as is usually done. It is somewhat elastic in structure, and is evidently designed to lessen concussion and divide the pressure upon the foot. The hoof should not be burned in fitting the shoe, as is commonly done. Unless your smith is very trustworthy, it is well to stand by and see your horse shod. —*Med. & Surg. Reporter.*

A chemist at Rugely was lately entrapped into selling without a witness some arsenic to a police constable unknown to him the constable made representations that the arsenic was for an old customer, and he admitted that these representations were false, but said he had been instructed to deceive the chemist by the chief constable. The case was defended by Mr. Glaisyer, the soliciter to the Chemists' and Druggists' Trade Association, who showed that this "dishonest and disgraceful" manner of obtaining information for a prosecution was also illegal. The constable, he said, was liable to a penalty of 20*l.* The magistrate fined the chemist 1*l.* and costs, and on Mr. Glaisyer's application granted a summons against the constable. The case will be heard on the 20th inst., and we hope a full inquiry will bring forward the real author of the trick.—*Chem. & Drug.*

A New Method of Detecting a Stimulating Monacular Amaurosis.

Although we already possess numerous means for determining the existence of monocular amaurosis, the following new and simple diagnostic point, which has been recently pointed out by M. Galezowski, is both interesting and valuable. When the patient is turned towards a strong light, and the healthy eye is closed completely, the pupil of the amaurotic eye dilates. When the light first strikes the healthy eye the pupil contracts spmpathetically; but, when the healthy eye is closed the pupillary sphincter of the diseased eye relaxes. As a rule, this dilatation of the pupil can be readily seen with the naked eye; the simultaneous and equal contraction of the two pupils is seen to be succeeded by a slow and progressive dilatation of the diseased eye, as soon as the healthy eye is closed. The pupil, as a rule, attains a diameter of four and one-half millimetres, but in some cases the dilatation is less marked, and can only be distinctly seen by the aid of a lens. It is impossible for malingerers to simulate this sign.—*Gazette Medicale de Paris.—Maryland Med. Journal.*

A Crystalline Coating for Paper or Wood.

Professor Böttger recommends the following recipe for this purpose:—Mix a concentrated cold solution of salt with dextrine, and lay the thinnest possible coating of the fluid on the surface to be covered by means of a broad, soft brush. After drying, the surface has a beautiful, bright mother-of-pearl coating, which, in consequence of the dextrine, adheres firmly to paper and wood. The coating may be made adhesive to glass by doing it over with an alcoholic shellac solution. The following salts are mentioned as adapted to produce the most crystalline coating; sulphate of magnesia, acetate of soda, and sulphate of tin. Paper must first be sized, otherwise it would absorb the liquid and prevent the formation of crystals. Colored glass thus prepared gives a good effect by transmitted light.—*Chemist and Druggist.*

Mastic for Fastening India Rubber on Metals

A mastic for fastening India rubber on metals may be obtained by steeping gum-lac, in the form of pulverised scales, in ten times its weight of concentrated ammonia. A transparent mass is thus formed, which, at the end of three or four weeks, becomes fluid without the use of warm water. This substance, applied on India rubber, becomes hard, and completely impervious to liquids and gases.—*Chemist & Druggist.*

Incompatibles.

Iron and arsenic is such a favorite combination with the profession that the writer is induced to call their attention to a case in which the combination, frequently of 'late prescribed, is, doubtless, entirely incompatible. He refers here to that of dialyzed iron with Fowler's solution. It is well established that this preparation is a solution of ferric hydrate, in water, containing the minimum per cent. of ferric chloride to produce a permanent solution. Now, when the alkaline solution of arsenic is brought into contact with a well-prepared dialyzed iron, a gelatinous precipitate of ferric peroxyhydrate is the result. We know this oxide of iron, especially when freshly precipitated, is one of the best antidotes for arsenic, producing an inert arseniate of iron. Therefore, if the effect of the solution of arsenic and iron is desired in this recipe, it is undoubtedly the truth to say it is a failure, for they are incompatible; but if arseniate of iron and peroxide of iron are desired —which the writer does not believe—then the expectation of the physician will be realized.—*Med. & Surg. Reporter.*

Treatment of Ranula.

Dr. Panas has frequently succeeded in curing ranula by the injection into the tumor of from four to ten drops of a concentrated solution of chloride of zinc. Among others he cites one obstinate case in which incision, seton and drainage had successively failed; the contents of the cyst were always reproduced, and finally operative interference was abandoned, except when attacks of suffocation rendered palliative puncture necessary. Ten drops of a solution of chloride of zinc, of the strength of one to ten, were injected without previous evacuation of the cyst, and shortly afterwards the injection was repeated with a 20% solution. In less than five weeks from the time this treatment was begun, a complete cure had been produced. This treatment is applicable to all varieties of mucous and serous cysts. It has succeeded in case of subhyoid cyst, which had resisted cauterization and the injection of tincture of iodine; it yielded to a single injection of chloride of zinc.—*Le Bordeaux Médical.—Medical Record.*

An Excellent Remedy for Asthma.

Saturate with strong solution of nitrate of potash, one part of coarsely powdered belladonna leaves and two parts stramonium and allow it to dry. On igniting a portion on a plate, combustion readily takes place and the fumes are to be inhaled. Relief is usually obtained in a few minutes.—*Canada Lancet.*

Disease from Impure Ice.

It was found in one instance, in Massachusetts, that an outbreak of intestinal disorder was due to the use of ice. The explanation is thus given: "Of the organic matter which is suspended in the water, and which may be removed by filtration, a portion, consisting of the larger and heavier particles, settles somewhat readily. Another portion, being more finely divided, remains for an indefinite time diffused through the water, and would be drank by any one using the ice in the ordinary way."—*Med. & Surg. Reporter.*

Colored Borax Varnishes.

It is well known that an aqueous solution of borax is able to dissolve shellac, forming a kind of varnish, to which any desired color can be imparted by mixing with pigments. Major Dr. Kahl, of Dresden, has communicated to the Dresden branch of the Saxon Society of Engineers the results of a large series of experiments made with these varnishes. He reports that they are very cheap, and dry very quickly, but they scale off from wood too easily. When this varnish is colored black with India ink and applied to paper, it possesses a fine gloss, but other colors, especially carmine, when mixed with this solution acquire an impure shade, and many pigments cement together in this solution, forming a hard and totally useless mass. The black shoe polish sold for ladies' boots is often made by adding some black pigments to this shellac solution. For bronze boots, rosanilin may be dissolved in any alcohol varnish.—*Scientific American.—Chemist & Druggist.*

How to Stop Coughing.

In a lecture once delivered by the celebrated Dr. Brown Sequard, he gave the following directions, which may prove serviceable to persons troubled with a nervous cough:

"Coughing can be stopped by pressing on the nerves of the lips in the neighborhood of the nose.—A pressure there may prevent a cough when it is beginning. Sneezing may be stopped by the same mechanism. Pressing, also, in the neighborhood of the ear may stop coughing. Pressing very hard on the top of the mouth inside is also a means of stopping coughing.—And I may say the will has immense power, too. There was a French surgeon who used to say, whenever he entered the wards of the hospital, 'The first patient who coughs I will deprive of food to day.' It was exceedingly rare that a patient coughed then."—*Maryland Med. Jour.*

Numeration of the White Blood-Corpuscles in Diphtheria.

MM. Bouchut and Dubrisay have examined the blood of twenty-four children suffering from diphtheria, of whom eleven cases are classed as diphtheritic pharyngitis, and thirteen as croup. Hayem's numerator was employed, and in all ninety-three examinations were made. These examinations demonstrate the occurrence of an increase in the number of white globules, and of a diminution in the number of red globules, in diphtheria. The average number of white globules was 26,660; in forty-two of the examinations the number was greater than this, and in one it even reached 105,000. The number of globules was only eleven times within the normal limits, viz: 5,000 to 10,000. The average number of red globules was 4,461,543. The augmentation in the number of white globules was greater in proportion to the severity of the diphtheria. In one case which may be considered as typical, the number varied between 28,237 and 65,887 dnring the course of the disease; it had reduced to 15,687 on the eve of the patient's discharge, and on the next day fell to 4,706.—*Gazette Médicale de Paris.*—*Medical Record.*

The Night Cries and Night Startings of Children.

From Canada Medical and Surgical Journal. Caspari attributes them to frightful dreams. In children under a year old, and especially in delicate, anæmic children, they are associated with mild or severe convulsions. He uses as a specific, bromide of potassium, and according to the age, gives 0·5 grmm. to 1·5 grmm. (gr. 7½ to gr. 23½) a day (℞ xxv. potas. brom., aq. ℥ iss— 3 i four times a day). According to Edlefsen's experience bromide of potassium always causes quiet and peaceful sleep in young children, but does not act so well in older ones. It acts well in convulsions, teething and meningitis. He gives a strong six months old child 0·5 grmm. (7½ grains) three or four times in the day, or once or twice in the evening. Younger and less robust ones, he gives 0·25 grmm. as a dose. In older children he often increases the dose to 0·75 grmm. several times a day. (Deutsche. Ztsch. f. Prakt. Med. 28, p. 284, 1876, und *a.a.* 0 38, p. 412, v. Dr. Edlefsen in Kiel). Quoted in *Schmidt's Jahrbucher*, Bd. 172, No. 11, 1876.—*N. Y. Ec. Med. & Surg. Journal.*

Disinfectants.

Professor Hartshorne, in his lectures on hygiene, divided disinfectants into—I. Absorbents; *e. g.*, dry earth, lime, and charcoal. II. Antiseptics; sulphurous and nitrous gases, chloride of calcium, zinc, iron, chloralum, bromochloralum, sulphate of iron, and carbolic acid. III. Decomposing agents: for sulphuretted hydrogen, salts of lead (nitrate); for dead organic matter, chlorine, iodine, bromine, and permanganate of potash IV. Destroyers (?) of contagion and disease germs; carbolic acid, salicylic acid, heat and cold.—*Med. & Surg. Report.*

Remedy for Whooping-cough.

M. Dervieux.—(*Lyon Medical*, No. 11, 1877.) M. Dervieux believes he has found a preservative means in aconite associated with ipecac and cherry laurel water. This mixture is either a veritable preventive, or simply an abortive. His formula is as follows:

Extract of aconite,	.05 grms.	=	¾ grain nearly
Cherry laurel water	4. "	=	1 dram "
Syrup of Ipecac,	3. "	=	¾ " "
Mucilage,	200. "	=	6½ ounces "

This is given as soon as the characteristic cough presents itself, in doses of a teaspoonful every hour to young infants; two teaspoonfuls to those more than three years of age, and a teaspoonful to adults every hour.—*Chicago Medical Jour. & Examiner.*—*Maryland Med. Jour.*

Liquor Chloroformi Compositus.

Squire says the following formula has been represented to him as that of chlorodyne, and he published it as:—

LIQUOR CHLOROFORMI COMPOSITUS.

Chloroform	4 ozs.
Ether	1 oz.
Rectified spirits	4 ozs.
Treacle	4 ozs.
Extract of liquorice	2½ ozs.
Muriate of morphia	8 grs.
Oil of peppermint	16 minims.
Syrup	17½ ozs.
Prussic acid (2 per cent.)	2 ozs.

Dissolve the muriate of morphia and the oil of peppermint in the rectified spirit; mix the chloroform and ether with this solution; dissolve the extract of liquorice in the syrup, and add the treacle; shake these two solutions together, and add the prussic acid.—*Chemist & Druggist.*

Bromide of Conia.

Mourrut has obtained prismatic crystals of this salt, which are tolerably stable, soluble in water and alcohol, having little taste and no odor. He neutralises conia with dilute hydrobromic acid and crystallizes with care.—*The Doctor.*

Hair Wash.

A good simple "oily hair wash" can be made by the following formula:—

Bay rum	4 ozs.
Glycerine	1 "
Olive oil	1 "

If not "oily" enough there is a very easy way out of that difficulty.—*Chemist and Druggist.*

Syrup of Chloral.

The Chemist and Druggist states that Follet's syrup of chloral, in which the taste of the drug is disguised by syrupus menthæ, is that which is now chiefly employed in France. M. Charles, however, believes he has succeeded in preparing a still more agreeable variety by the adoption of the following formula:

℞ Chloral hydrat	gr. iv;
Aq. bullient	gr. ij;
Sodæ carb. (conc. sol.)	q. s.;
Ess. menthæ	m. j;
Syrup simp	gr. xciv;
Chloroform	m. j.

The carbonate-of-soda solution is to be added drop by drop, till complete neutralization is attained. The proportion of chloral, it will be seen, is very nearly one in twenty-five.—*Louisville Medical News.*

Mistura Guaiaci Viridis. (B. H.)

℞ Potassii iodidi	ʒ iij.
Tr. guaiaci ammoniatæ	fl. ℥ ijss.
Aquæ	℥ iij.
Ext. fl. dulcamaræ, q.s. ad.	℥ viij.

Dissolve the iodide of potassium in the water, add the tincture in portions, and shake well together until a clear green mixture has been produced, with separation of most of the gum-resin. Then strain, and add the fluid extract. Dose, in gout or rheumatism, one to two teaspoonfuls. —*New Remedies.*

Remedy for Bromine Acne.

The Doctor says that a patient in St. Bartholomew's Hospital, who has bromine acne as a result of taking half-drachm doses of bromide of ammonium to stop her epileptic fits, has been relieved of the acne by the use of the following lotion:

℞ Sulphuris precip	℥ iij.
Spir. camphoræ	ʒ j.
Aquæ calcis	ad. f ʒ iij.

Fiat lotio.

Ricord's Cough-Pills.

Morphiæ hydrochloratis	gr. v;
Extracti hyoscyami	gr. viij;
Rad. belladonnæ pulv.	
Rad. glycyrrhizæ pulv.	ää gr. xlv;
Mellis	
Balsami tolutani	gr. lxxv;
Ol. theobromæ	gr. lxxv.

Make into one hundred pills. Each contains one twentieth of a grain of hydrochlorate (muriate) of morphia.

Dose—One pill every five or six hours, in chronic bronchitis accompanied with cough.—*New Remedies.*

Mistura Glycyrrhizæ Composita.

(Ch. R.) Brown mixture, which deposits no sediment:

℞ Fl. ext. of licorice	fl. ℥ ij;
Glycerine	fl. ℥ iv;
Syrup	fl. ℥ vjss;
Tr. opii camphor	fl. ℥ ij;
Vin. antimonii	fl. ℥ j;
Spts. ætheris nitros	fl. ℥ ss.

Mix the glycerine and fluid extracts; then mix the last three liquids, add the two mixtures together, and lastly the syrup. This m xture is dichromatic, appearing brown and opaque by reflected light, but clear and reddish by transmitted light.—*Ibid.*

Tasteless Tincture of Chloride of Iron.

℞ Solution of chloride of iron, U. S. Ph	1 oz.;
Citric acid	544 grs.;
Sodium carbonate	1,000 grs. or q.s.
Water, distilled	1 oz.;
Alcohol	q. s.

Dissolve the citric acid in the distilled water, and heat to the boiling-point; gradually add the sodium carbonate until the acid is saturated. Mix this with the iron solution, which will now assume a beautiful green color, and make up the measure to four ounces with alcohol.—*Ibid.*

In Anal Fissure.

Trousseau recommended both the tincture and extract of rhatanny in fissure of the anus, a drachm of each in five ounces of water, by enema. In prescribing the remedies glycerin will be found a convenient excipient; as,

℞ Tinct. krameriæ	℥ j:
Ext. krameriæ	ʒ j;
Glycerinæ	℥ iij;

S. A tablespoonful in a tumblerful of water by injection.—*Louisville Med. News.*

EDITORIAL.

Relative Strength of Fluid Extracts containing Alkaloids.

In reply to several enquiries as to Prof. Baker's letter upon the method to ensure uniformity in Narcotic Extracts, and those containing alkaloids, we publish it entire in this issue.

It is well known that we have for years pursued Prof. Mayer's method, modified by our experience, and every day fully confirms our early conviction. More than two years since we wrote Dr. Wells upon this subject, and we give a short extract from the same. Our letter at that time called out Prof. Baker's letter to him, Feb. 15th, 1877.

Letter to Dr. H. M. WELLS.

My Dear Sir:—The question in your note of the 15th inst. as to how and when the impositions upon the Profession in the form of adulterated or inferior fluid extracts are to cease, can only be determined by the Profession themselves. So long as they encourage it, by using such articles, because they come cheaper, will it continue. In many instances Physicians are not at fault, supposing they are using those of proper strength, and because they do not get the proper effect, condemn the whole class of fluid extracts. Many apothecaries go upon the principle that "they come cheaper, and sell just as well, they, (the Doctors) don't know the difference." It is becoming too fashionable for any one with a simple displacer to make a strong tincture and put it forth as a fluid extract; and because they pass a pint of diluted alcohol through a pound of material, say it represents one ounce of the crude article for each fluid ounce. When in truth, not one of these makers knows how much it does really represent, or how much active principle is contained in one ounce, or what should be represented in one ounce of the preparation; and here is the fallacy of the whole thing, these preparations vary from 30 to 80 per cent. of strength, and not one is found to come to the true standard. Indeed it cannot be otherwise, for they do not take the trouble to study the subject, and test the crude article or the product; the main object being to make something that will sell just as well, for "*the Doctors don't know the difference.*

When a Physician sends to the apothecary and procures alcohol, he expects *ninety-five per cent.* in strength, and does not expect *eighty per cent.* He regards it fraudulent to give him a diluted alcohol. When he sends for quinine, he expects quinine, not thirty to fifty per cent. of cinchonine, or some inert substance. And thus it is when he orders Fluid Extracts, he expects a *representation* of the *crude drug*, *ounce* for *ounce*, and not a mere *percolate* or *tincture*, representing from *twenty-five to fifty per cent.* of drug.

The method of Prof. MAYER (with whom the late Prof. DUSSAUCE and the writer, pursued many interesting experiments) provides a sure protection; it is complete and requires experience and careful observation. It enables us to test all crude materials, and all preparations to which it is applicable, that a standard of strength may be maintained. For instance take Hyoscyamus, the average number of grains of test solution required to precipitate all the alkaloid in one ounce of crude material completely exhausted, has been determined through a period of six years to be 760, the average—hence, we require each ounce of fluid extract to be made of such strength that it will require at least 775 grains, making that our standard, and as a matter of comparison have subjected twenty-one other manufactures, or what we have referred to as tinctures, to precisely the same tests and find that they are not up to the standard as is illustrated by the following enumeration of grains required in each case: 260, 265, 160, 148, 200, 316, 236, 210, 296, 98, 180, 138, 330, 198, 84, 340, 184, 270, 310, 330, 320. These are a fair illustration of how other kinds average and what uncertainty the "Doctor" is subjected to, in the articles that *sell just as well.*

Researches upon the Quantitative Determination of Alkaloids.

Dr. H. M. WELLS:

I have your letter as to what I know of Prof. Mayer's method, as it is called, in testing preparations containing alkaloids, and give you as briefly as possible all the knowledge I have and how I came to examine the method.

In the year 1862, Prof. Ferdinand F. Mayer presented a paper to the "American Pharmaceutical Association" setting forth the integrity of Iodohydrargyrate of Potassium as a reagent for the quantitative estimation of alkaloids by volumetric determination, whether examined from the original source, in preparations, or pure state.

The Doctor also communicated another paper, which he completed Dec. 10th, 1862, upon the same subject exhibiting a vast amount of research.

Mr. Henry A. Tilden was much interested in these researches, and was with him and aided him in his investigations, and the House of Tilden & Co. have relied upon this as a reagent for the testing and fabrication of their alkaloid extracts of even quality, so that a given dose from any one of them manufactured at the present time may exactly accord with a like dose from the same preparation produced upon any future occasion.

Unsuccessful manipulations by his method have created a diversity of opinion among chemists in regard to the value of iodohydrargyrate of potassium for quantitative estimation of alkaloids in pharmaceutical preparations, but Mr. Tilden never ceased to have faith in it; probably his thorough acquaintance with Prof. Mayer's methods made him more skillful in its use than others who fail to appreciate it.

Having been called to New Lebanon in the prosecution of other interests, Prof. Mayer's methods were exhibited to the writer as being not only interesting but entirely reliable.

Considering the complex character of the chemical intimacies in fluid extracts, we did not regard the attainment of accurate results possible, and ventured to express that opinion.

Messrs Tilden wishing to reassure themselves, and (if possible) to detect any fallacies in their mode of testing and processes of fabrication, so as to be in position to adopt every measure that would afford, if possible, more perfect uniformity in their preparations to a fixed standard, proposed to me, to make a thorough investigation in conjunction with the chemist in charge, as well as the one having the fluid department in charge, of all the processes employed by them for testing and fabrication.

Ten days' diligent application was devoted to the accomplishment of satisfactory conclusions.

To afford the reader any rational conception of the manner in which the examinations were conducted, it is proper to relate some of the methods pursued.

The chemist of the establishment is also a pharmaceutist and has acquired very considerable skill in testing with iodohydrargyrate of potassium.

He kindly offered to subject himself to any kind of trial the writer chose to impose.

Considering his implicit confidence in his skill to manipulate accurately, the proposal was accepted and he was required to commence and complete the following series of experiments, under my observation.

First; To make three quantitative examinations of the same solution.

Second; To quantitatively determine the amount of alkaloid in any fluid extract contained in a numbered bottle which might be handed him, without a label or other mark to indicate the nature of its contents, or source thereof.

Third; To assay quantitatively extracts containing two or more alkaloids and subsequently isolate, or part these bodies and make a test of each separately, and have the aggregate of the individual results conform to the total of the original examination.

Fourth; To determine the alkaloid in three samples of the same fluid extract of different degrees of concentration, and subsequently mix the samples to form one solution, and afterwards estimate the total alkaloid of the mixture and have the determination correspond with the aggregate of the first three obtained results.

Fifth; To make aqueous sulphuric acid solutions of the sulphates of Quinia and Cinchonia, and then divide each into two equal portions and subject one part of both compounds to a quantitative examination without any admixture, and the remaining portions to a like examination after saturation with solutions of Carmel, Tannin, Gum Arabic, Albumen, Starch and Sugar.

The first requisition of the series was fulfilled by three examinations of the Fluid Extract of Veratrum Viride taken from the stock of the establishment, and afforded results so nearly approximating perfection as to require a very delicate balance to discriminate any relative difference.

The second series of requests was complied with, by filling bottles labeled numerically from the fluid extract reservoirs, passing them over to the chemist for his determination of the alkaloid therein contained, without his knowing the name or nature of the body sought.

The examination was made and report recorded and the results were then compared with the fixed standard established by the company as the degree of concentration necessary for a commercial product.

The greatest difference of any experiment in this series did not exceed one fifty-eighth ($\frac{1}{58}$) of a grain for the quantity of alkaloid contained in 437.5 grains of fluid extract employed, although the same experiment was several times repeated under false numbers without the chemist's knowledge.

This difference is entirely admissible considering the difficulty in obtaining absolutely perfect manipulation, and is also still more remarkable when it is remembered that the operator was, for the time being, ignorant of the chemical relations of the substance acted upon, consequently could not manipulate to so great an advantage as when apprised of the obstacles with which one must contend.

The third demand was satisfied with experiments upon the fluid extract of Calisaya bark by the determination of all the alkaloids therein contained, and subsequently isolating the three and estimating them separately.

The aggregate of the individual estimates of Aricine, Cinchonia and Quinia exhibited a deficiency in comparison with the determination from the bark extract, but might be considered a good commercial result, as the discrepancy was $\frac{198}{1000}$ (one hundred and ninety eight one thousandths) of a grain only, to the ounce of 437.5 grains of fluid extract used.

Any one familiar with the intricacies of this last experiment will readily understand how difficult it is to pass through so complicated a process and retain the theoretic quantities.

The fourth series of experiments was prosecuted to ascertain the per cent. of Atropia in three separate ounces of the fluid extract of Belladonna containing a variable quantity of active principle each, then subsequently mixing the three reserve samples of the same preparation, and testing that product for the alkaloid.

This experiment succeeded perfectly well and was only an illustration of the fact that the methods employed by the establishment for the fabrication of preparations always containing a fixed amount of active principle is correct.

This may be known when it is stated that the first maceration or digestion does not remove all the active principle from the herb or bark, and it often becomes necessary to repeat the operation a number of times.

The fifth series of examinations was conducted by estimating pure crystallized Cinchonia and Quinia sulphates dissociated from other principles and subsequently testing the same amounts in solutions with coloring matter and other organic bodies.

The first experiment of this series did not succeed well, because the tannic acid, as we afterwards observed, retained a portion of the Quinia in solution, a result not at first anticipated as Prof. Mayer implies that the precipitation is not effected by tannin: but he must have intended to represent that its presence in the form of tannates would not oppose the transformations.

The second and third attempts with modified conditions were complete successes, and are useful in indicating that a process may be theoretically correct: nevertheless, an extensive familiarity with the substances and associations acted upon is necessary to secure intelligent manipulation.

Many persons know how transformations are and should be accomplished: but it is an additional matter to perform the work, and requires another kind of intelligence.

However, Prof. Mayer's methods are so ingenious and useful for relative determinations that he should be held in respectful remembrance by all learned men; but it must be admitted that his processes for the whole series of alkaloids in the hands of operators, not familiar with the consequent associations in Tinctures and Extracts, are more complicated than his papers represent.

The investigation of processes employed by Messrs. Tilden & Co. to fabricate their preparations, consisted in an inspection and observation of the work in regular progress.

All the appurtenances and appliances of the laboratory are such as to preclude and exclude

the possibility of any injury to the material or ingredients employed, or products obtained, as all the macerations and digestions are concentrated in "vacuo" at temperatures so mild that no decomposition of delicate organic compounds constituting active principles, and useful associations can occur.

If medicinal preparations are useful in any case, it is desirable they should conform to some established standard, and it can be said without fear of contradiction, that Messrs. Tilden & Co's fabrications are entitled to liberal patronage, by reason of their uniformity and complete concentration.

A manufacturer may present his productions, for commercial acceptance, of irregular and inferior quality, and resort to measures that resemble a subterfuge to establish a commendable notoriety for his goods: but the house above named, rejoices in the self consciousness of having made use of all the agencies essential to the fabrication of a reliable and useful product, with each and all their preparations.

If any more commendable methods exist than those employed by this establishment, they are unknown to the writer, and numerous relative examinations of the productions of other firms convince me that this house possesses the advantages of long experience, and are in nowise superseded in skill. HAYDN M. BAKER,
Chemist.

Elixir Iodo in Gangrene of the Lungs.

DR. WM. JONES, of Newburgh, N. Y., read at the last meeting of the Hudson River Eclectic Medical Society, a paper of which we can give but a synopsis reserving a detailed publication until regularly issued in the Transactions of the Society.

A laboring man residing in the country was attacked with fever attended by a troublesome cough and profuse expectoration of most offensive odor. There were also extreme debility and prostration—all the symptoms indicating gangrene of the lungs as the primary difficulty. The antecedents of the patient were those of a hard working man who for the sake of accumulating money was utterly regardless of any risk or exposure incurred, and who by a long course of persistent neglect of the most ordinary laws of Hygiene had rendered himself peculiarly liable to just such a malady.

Recognizing the fact that he had a broken-down constitution to deal with, the Doctor first tried the effect of Aconite and Gelseminum for the purpose of stimulating the nervous capillaries to a more vigorous action. A partial success rewarded his efforts—but finding that the benefit was not likely to be permanent, and despairing of final success, he determined as a last resort to try Tilden's Elixir Iodo-Bromide of Calcium Compound, frankly avowing that at the commencement he had little confidence in its efficacy, but was induced to use it simply by the numerous recommendations of members of the profession which had been brought to his notice. He began with teaspoonful doses, increasing the quantity *pro re nata*, and in a short time found to his great surprise that his patient was evidently improving. He gained strength—his bowels became regular—appetite improved—his cough was less distressing, and the expectoration, which had been intolerably offensive, greatly lessened and deprived of its characteristic odor. He took three bottles of the Elixir Iodo, and at the end of that time was restored to his normal health and vigor.

From letter of J. H. POTTER, M. D., Schroon Lake, N.Y.

FOR BURNS.—Slacked lime 1 part, glycerine 50 parts, chlorinated Hydc, Ether, 1 part.

FOR SALIVATION.—*Bromo-Chloralum*, (Tilden & Co.)

FOR TAPE WORM—Drink freely of a strong tea of Pomegranate Bark, fasting.

FOR CHRONIC RHEUMATISM.—Fl. Ex. Asclepias Incarnata.

FOR CONSTITUTION.—Pure sulphate of iron 2 parts, Socotrine aloes 1 part, Nux Vomica 1-5 part, make into 4 gr. pill, 1 to 3 after dinner.

FOR NERVOUSNESS.—10 grain doses of Bromide of potash, dissolved in a wineglass of water.

FOR DYSENTERY.—Nitrate of soda.

FOR POST-PARTUM HEMORRHAGE.—Cannabis Indica.

FOR CORNS.—Apply, morning and evening, one drop of solution of Perchloride of Iron.

We have suggested to Dr. Potter to use on burns and scalds, Bromo-Chloralum diluted one part to four of water, and applied as cold as it can be made with ice. We use it entirely in our works; the aluminium acts upon the denuded surface, and the chlorine allays the inflammation. Cloths should be quite wet, and changed as soon as warm. We have never seen a case that did not yield promptly, and what is of great value no suppuration takes place, and no scar results.

☞Correspondents will oblige by writing plainly their *names, Town, County and State.* We are frequently unable to answer letters because these are omitted.

THE
JOURNAL OF MATERIA MEDICA,
A Monthly Journal Devoted to
MATERIA MEDICA, PHARMACY, CHEMISTRY,
AND NEW REMEDIES.

New Series.] November 15, 1877. [Vol. XVI.—No. 11.

Lectures on Diseases of the Heart.

By Austin Flint, M. D.,

PROFESSOR OF THE PRINCIPLES AND PRACTICE OF MEDICINE AND OF CLINICAL MEDICINE, IN THE BELLEVUE HOSPITAL MEDICAL COLLEGE

[Reported for The Medical Record.]

Lecture IV.

ANGINA PECTORIS—LESIONS OF THE RIGHT SIDE OF THE HEART—INORGANIC MURMURS.

Gentlemen:—I will next direct your attention to a neuralgic affection which occurs especially in connection with lesions at the aortic orifice—namely, angina pectoris.

This affection rarely occurs, with characteristic features, independently of cardiac lesions; but, although commonly referred to the aortic orifice, they are not invariably found in that situation. Angina pectoris is a neuralgic affection characterized in a typical case by extreme pain, which the patient refers to the precordia as the point of departure, and from that point extending to the left shoulder more frequently, often extending down the left arm, sometimes no farther than the elbow, at other times to the forearm and fingers; in occasional cases extending to the right shoulder and extremity, and in rare cases extending to all the extremities, accompanied with great disturbance of the heart's action in the way of increased frequency and irregularity, and a feeling which is experienced in an intense degree of impending death. These are the features which distinguish a well-marked case of angina pectoris.

It is an important affection, for, when associated with certain lesions, it always involves more or less danger of sudden death; and yet, patients may suffer from this affection for months and years without the occurrence of such a result. I will first say a few words as to the diagnosis of this affection. There is liability to error in this regard, as it is not uncommon for both sexes—more especially, however, the female sex, to experience more or less pain referable to the precordia. These pains generally depend upon intercostal neuralgia, and, to determine that it is not the pain of angina pectoris, but that of intercostal neuralgia, it is only necessary to direct attention to the diagnostic criteria of the latter affection. In the intercostal neuralgia we find the three points of tenderness, or at least two out of the three: we find usually that these patients are anæmic; frequently it will be found that they have had intermittent fever, or, more often, that they are affected with pneumonic phthisis. Intercostal neuralgia is a quite frequent concomitant of the latter affection. The pain of intercostal neuralgia is not intense, usually, and it is confined to the precordia or its immediate neighborhood; that is, it does not extend to the shoulder, or down the arm, and is not accompanied with that feeling of impending dissolution which characterizes angina pectoris. Moreover, it is not uncommon for patients to complain of a certain amount of pain in the shoulder extending down the arm and producing symptoms some what like those of angina pectoris, but it is not sufficiently intense, and does not give rise to disturbed action of the heart and a sense of impending death. A physical examination of the heart renders valuable assistance in solving these cases. I refer to this error in diagnosis because I am aware that it has been made, although it would seem to be a simple matter to make the necessary discrimination between the two conditions.

In addition, there are cases in which the features of angina pectoris are more or less marked without any evidence of disease of the heart. If we were to define angina pectoris as a neuralgic affection associated with disease of the heart, these cases would not belong in this category. Formerly I regarded this class, those in which the symptoms resembled those of angina pectoris, and yet were not attended by any evidence, either by physical signs or symptomatic phenomena of disease of the heart, as cases of pseudo-angina pectoris. If we do not accept the view that angina pectoris is always associated with car-

diac lesion, we must assume that in a great majority of cases disease of the heart, especially aortic lesion, is present. But in a certain number of cases well-marked symptoms of angina are present independently of any recognizable cardiac lesion. This is an important consideration in connection with the question of prognosis. If there be coexistent disease of the heart the prognosis differs from that to be given when the angina is not to be associated with cardiac disease; it is less favorable. I have spoken with regard to the occurrence of sudden death in cases of angina pectoris. What are the circumstances which render this danger greater or less? How are we to appreciate the amount of liability to sudden death? There is no absolute freedom from danger, although we have evidence that the disease of the heart is not in itself at all serious. With regard to that point I have had occasion to somewhat modify the views I formerly entertained. Formerly, when I saw a patient suffering from symptoms of angina pectoris, and these symptoms were associated with physical signs of slight valvular lesion of the heart, I gave the opinion that there was no danger of sudden death. I have, however, been led to modify that opinion somewhat; still, the danger of sudden death, under these circumstances, is comparatively small.

On the other hand, the danger of sudden death in angina pectoris is great in proportion as there is advanced disease of the heart; free aortic regurgitation and dilatation of the heart, with fatty degeneration. Has the patient, then, organic disease of the heart? If so, what, and how important is such organic disease? Has he free regurgitation at the aortic orifice; is there much enlargement with dilatation, and are there any evidences of fatty degeneration? When we are obliged to answer these questions in the affirmative, there is great danger of sudden death in connection with angina pectoris. A patient may, however, pass safely through many paroxysms under these circumstances, before the fatal one is reached. It is not the neuralgic affection itself which destroys life, but it is the associated disturbance of the heart's action that is the important cause of death. I might, in answer to the question—How are we to appreciate the amount of danger?—say that it is in proportion as the heart is disturbed in its action during the paroxysm. If the heart beats regularly, the patient is probably, for the time being, safe. The danger, then, of sudden death in connection with angina pectoris, is in proportion as there is feebleness and irregularity in the action of the heart. I suppose the cause of death to be weakening of the heart's action so that the left ventricle becomes overfilled, which of course is most likely to occur with the free aortic regurgitation, and the heart is unable to relieve itself by the contraction of the ventricular wall.

If you ask why this neuralgic affection is associated with disturbed action of the heart, which lasts only while the paroxysm lasts, I can only say that probably in connection with the neuralgic pain there is an influence exerted upon the heart through the *par vagum*, such as prevents the proper regulation of the heart.

We may explain, perhaps, the sudden death which occurs in cases of angina in which there is no disease of the heart present, or in which the disease of the heart itself is not sufficient to explain the death, by supposing that in connection with this neuralgic affection there is an influence transmitted to the organ, similar to the galvanic current, through the *par vagum*, which has the power to arrest its action.

I cannot close the subject without saying that persons may present well-marked symptoms of angina pectoris, without evidence of disease of the heart, and may also recover from the liability to it.

I have met with a few instances of this character.

One case of this kind which I now recall occurred in the person of a physician. He had well marked paroxysms of angina pectoris, and supposed himself to be in continued danger of sudden death. On examination of his heart I was able to assure him that there was no disease present, and that he was not in the danger he had supposed himself to be.

He resumed his practice gradually, within a short time was pursuing his regular vocation, the paroxysms disappeared, and ten years afterwards was in perfect health, having never suffered from any return of the symptoms. As regards treatment, it resolves itself into measures which may be employed for the immediate arrest of the paroxysm, and those which are indicated by the coexistent disease of the heart; the object being to place the general system in the most favorable condition, so that the paroxysms will be likely to be recovered from, and not prove fatal.

With regard to the paroxysm, the indication is to give more or less freely of stimulants, either alcoholic or ethereal. Of the ethereal preparations, Hoffman's anodyne may be given freely. Alcohol may be administered in the form of spirit and not much diluted, the object being to produce a prompt and distinct impression. In this manner the patient is carried over the paroxysm. A few drops of laudanum,

or of the paregoric elixir may perhaps be added to the stimulant with advantage.

We have a remedy which is certainly of great value as possessing the power to arrest the paroxysm very promptly, and that is the nitrite of amyl by inhalation. I have in repeated instances prescribed this remedy, and I know of one patient who had suffered severely from attacks of angina, not passing a day without one and sometimes several paroxysms, who was able to arrest them so promptly by the inhalation of a few drops of the nitrite of amyl that the affection became quite tolerable.

As regards the second indication, it is essentially that which belongs to the treatment of valvular lesions and enlargement of the heart, and need not be again considered in detail.

LESIONS AFFECTING THE RIGHT SIDE OF THE HEART.

We pass now to the consideration of lesions affecting the right side of the heart; lesions involving the tricuspid and the pulmonic orifice. These lesions are rare. When we meet with them they are, in general, congenital; hence it is that we find these lesions in children too young to suffer attacks of articular rheumatism. It is true that acute articular rheumatism occurs occasionally in quite young subjects, but such cases are comparatively rare. I will direct your attention, first, to the tricuspid orifice. It seems that this valve in health is not quite sufficient to prevent blood from regurgitating; it is a kind of safety-valve, and this leakage has received the designation "safety-valve function" of the tricuspid valve. The mere fact of insufficiency of this valve, then, does not imply an abnormal condition.

At the pulmonic orifice we have lesions similar to those which are to be found at the aortic orifice, though especially involving obstruction rather than regurgitation.

We have corresponding murmurs to represent these lesions. A tricuspid current, however, does not invariably give rise to an appreciable murmur, whereas the mitral regurgitant current almost invariably produces a murmur. This is not easy to explain, but it is a clinical fact. How do we determine that regurgitation occurs at the tricuspid orifice when no appreciable murmur is present? It is determined by the fact that after death the valve permits free regurgitation, as shown by the water-test.

We may determine the fact during life; for, not very infrequently we get a venous pulse on the right side of the neck which is ventricular in character, synchronous with the construction of the ventricles, and that is conclusive evidence of tricuspid regurgitation, although no murmur is present.

The murmur, when present, of course, occurs with the first sound, like the mitral regurgitant. Indeed, the mitral regurgitant usually coexists with the tricuspid regurgitant murmur. The tricuspid regurgitant is distinguished from the mitral regurgitant by its localization at the right inferior margin of the heart, and its transmission to the right rather than to the left. The coexistence of these two murmurs is determined by the differences in pitch and equality between a systolic murmur at the apex and at the right margin of the heart.

Lesions at the tricuspid orifice lead to dilatation of the right auricle, and, as remote results, to dropsy and cyanosis; the same conditions pertaining as in connection with dilatation of the left side of the heart in consequence of mitral regurgitation.

If there is insufficiency of the sigmoid valves at the pulmonic orifice, we should expect to get a pulmonic regargitant murmur; and I suppose such a murmur is produced, but it has not been my fortune to meet with an instance in which I was able to recognize it. I imagine that it would be very difficult to separate such a murmur from that accompanying an aortic lesion.

If, however, we should find a murmur and could be certain that it represented contraction at the pulmonic orifice, and there was no lesion at the aortic orifice, we might infer that the murmur indicated pulmonic, and not aortic regurgitation.

The pulmonic direct murmur, undoubtedly, exists, and we may determine its presence, and thus localize the lesion without much difficulty.

If you place your stethoscope over the second intercostal space, just at the left border of the sternum, the murmur, if present, can be heard. With pulmonic obstructive lesion we have a murmur with the first sound of the heart and having its maximum of intensity at this point, and not upon the right side, as is the rule with the aortic lesion.

But you must not take the maximum point of intensity as the only evidence of a pulmonic direct murmur. It must be associated with the fact that the pulmonic direct murmur is not propagated into the carotid. The aortic direct murmur is almost invariably propagated into the artery.

If, therefore, we find a murmur having its maximum of intensity in the second intercostal space on the left side of the sternum and it is not transmitted into the carotid artery, the diagnosis of pulmonic direct murmur is made.

There is probably such a murmur as the tri-

cuspid direct, and it is determined by a presystolic murmur and heard upon the right side of the sternum, instead of within a certain space about the apex. Such a murmur probably exists, but I regard it as exceedingly rare.

I do not dwell at much length, as you observe, upon lesions affecting the right side of the heart, and simply for the reason that they are comparatively of rare occurrence and unimportant.

INORGANIC MURMURS.

I next propose to ask your attention to inorganic murmurs of the heart—that is, murmurs which are produced without the lesions, which are generally represented by cardiac murmurs. These murmurs, as a general statement, depend upon an abnormal condition of the blood—hence are known as hæmic murmurs, or, more frequently, as anæmic murmurs, because the condition of the blood which is generally represented by these murmurs is incident to anæmia. Either the anæmic condition itself, the paucity of red corpuscles, disposes the blood to vibration, or some other condition associated with the anæmic state is the cause of the murmur.

At first, perhaps, to those who have not given much attention to this subject, the inquiry arises, if we have an inorganic murmur and are obliged to distinguish between it and an organic murmur, may there not be some doubt in settling the question? This inquiry is natural; but the truth is, we are not usually much embarrassed in determining whether these murmurs are inorganic or whether they are organic.

Let us see, now, of the four important murmurs representing lesions in the left side of the heart, which may be either organic or inorganic. We will begin with the mitral direct murmur, and this leads me to the explanation of a fact which I have not yet mentioned, namely, that we may have mitral direct murmur without mitral lesion. Perhaps we cannot call this an inorganic murmur, for it is dependent upon lesions, although the lesions are at the aortic orifice and not the mitral. This seems at first hardly probable, but I trust it can be made clear, We may have a loud mitral direct murmur and yet no mitral lesions, and yet this statement of the fact is based upon physical examination during life, and autopsical examination. I have met with a few cases in which there could be no question with regard to the presence of a mitral direct murmur, and yet, after death no lesion whatever was presented at the mitral orifice. This is the fact, and the question is, how is it to be explained? So far as I am aware, no one has attempted an explanation except myself, and that which I have given is as follows. The murmur occurs in connection with free aortic regurgitation.

What is the condition of the left ventricle as the auricle contracts, when this murmur is present? First in the order of succession of the movements of the different portions of the heart is the contraction of the two auricles. Prior to that, however, the blood is flowing into the ventricular cavity, because of the regurgitation at the aortic orifice; and now, what is the condition of the mitral valve and the left ventricle as the auricle contracts? The ventricle is already partly filled with blood, and the curtains of the valve are floated out so as to come in contact with each other; then comes the auricular contraction and the direct current of blood is forced between those curtains and throws them into vibration, exactly as when the orifice is narrowed, and the murmur is produced.

The murmur, the direct mitral, with free aortic regurgitation, is variable; sometimes it is present, and at other times it is absent, depending upon the variable condition as regards the accumulation of blood in the left ventricle. There is another fact which I have omitted to mention, with reference to the mitral direct murmur when it depends upon lesions at the mitral orifice, and that is, that it may disappear. The disappearance, however, is by no means a good omen. It simply means that the left auricle has become so dilated and the muscular power so diminished that it does not produce a current sufficiently strong, when it contracts, to give rise to a murmur.

I do not think you will find this statement noticed in any work upon diseases of the heart.

In the next place, is it ever questionable whether the mitral regurgitant is an organic or an inorganic murmur? Not exactly; and yet, it is a question whether the murmur indicates important lesion. I suppose that this murmur cannot be called, strictly speaking, an inorganic murmur. We have had occasion to refer to the fact that a murmur at the mitral orifice without regurgitation, is the result of change in the walls of the ventricular cavity, which gives rise to no symptoms and to no danger. It may be produced by a tendinous cord stretching across the cavity, or a roughness of the endocardial membrane. A blowing sound synchronous with ventricular systole, it is said, may be produced by the apex of the heart striking against the little tongue of lung, which is closely adjacent to it, thus pressing the air from the air-vesicles with sufficient force to produce a murmur with inspiration, especially at the end of that act. It is a reasonable suggestion, and will probably account for some instances in

which we have mitral systolic murmur without any other evidence of disease of the heart.

Let me caution you about regarding a mitral systolic murmur, when no other evidence of disease of the heart is present, as possessing very great importance. I have a patient under observation who has had a mitral systolic murmur for thirty years, and yet there has never been any trouble connected with the heart.

A mitral systolic murmur is rarely due simply to an abnormal condition of the blood, but an anæmic condition will intensify this murmur the same as it intensifies all the organic murmurs.

Now we come to the aortic orifice, and first with regard to aortic regurgitation, is it ever questionable whether the murmur representing it is organic or inorganic? This question is at once answered in the negative. An aortic regurgitant murmur is always organic; it cannot be produced without insufficiency at the aortic valves.

We have now reached the aortic direct murmur, and it is with reference to this murmur especially that the question will arise as to whether it is an organic or whether it is an inorganic murmur.

When the aortic direct murmur is inorganic, there is often a coexistent murmur at the pulmonic orifice.

What are the circumstances by which we discriminate between an organic and an inorganic aortic direct murmur? We can usually make this discrimination without difficulty, but there are cases in which such discrimination is not easily made. When, however, there is much difficulty in determining the nature of the murmur, it possesses no practical importance.

What are the symptoms which justify the inference that this murmur is inorganic? It may be inferred from other evidences of anæmia, such as pallor of the face and prolabia. Again, we have a physical sign, which is proof positive of an anæmic condition of the patient, and which would lead us to the inference that the murmur is inorganic, although no other evidence of anæmia was present, namely, the venous hum. This is the most reliable physical sign, when present, of anæmia, that we possess. To determine whether it is present, turn the head of the patient to the left as far as possible, so that you can place the stethoscope in the triangular space behind the sterno-cleido-mastoid muscle, and just above the clavicle. If then you get a humming sound, it is in all probability the venous hum produced by the current of blood passing through the superficial veins. To render it certain, place the finger on the veins above or below, so as to interrupt the current of blood, and now if the continuous murmur ceases instantly, and is reproduced when the pressure of the finger is removed, the question of the presence of the venous hum is settled.

At the same time we frequently get a murmur in the carotid, particularly on the left side, resembling the sound of a spinning-top. The French have called it the *bruit du diable.*

The coexistence of this venous hum is a valuable point in determining that the murmur which we get from the base of the heart with the first sound is inorganic or hæmic. The other points are these: If it is a purely inorganic murmur we do not get with it an aortic regurgitant murmur. If we find an aortic regurgitant and an aortic direct murmur associated, the presumption is that the direct murmur is organic. We, moreover, get the pulmonic and aortic second sounds in their normal relation to each other when the aortic direct murmur is inorganic. We do not get evidence of enlargement of the heart if the murmur is nothing more than hæmic.

If there be no evidence of organic disease of the heart beyond the murmur, these points will come in to corroborate the conclusion that the murmur is inorganic; or, if it does depend upon lesion at the aortic orifice, that the lesion of itself is unimportant.

The venous hum is an important physical sign, as indicating the existence of anæmia, and important also as indicating to us when the anæmic condition has been removed. It is not uncommon for patients who are suffering from anæmia to improve so much as to consider themselves well, and yet the anæmic venous hum be present. It is fair to conclude, if so, that however much the improvement may be, there is room for further improvement, and that continued treatment will lead to a still better condition.—*Medical Record.*

Clinical Lectures.

BY PROF. FRANK H. HAMILTON, M. D.,
AT THE BELLEVUE HOSPITAL.

On the afternoon of Wednesday, Nov. 7th, Prof. Hamilton presented a series of ten cases of fracture of the thigh in adults, with the special purpose of exhibiting the dressings and splint apparatus most approved in the practice of that surgeon. He began by showing that fractures of the shaft of the femur are always oblique, and more than that, he showed that

they were *very* oblique. In cases wherein the fracture was transverse, the limb must have been paralysed at time of accident. The Professor next spoke of the difficulties always experienced in making the extension, without rotation or bruising the soft parts about the foot, until Dr. Crosby of Hanover, Vt., about twenty years ago, suggested the use of the adhesive plaster which clung to the surfaces of the leg, but injured nothing by either pressure or traction: that could not be tolerated.

This plan of Dr. Crosby's marked an era in American Surgery. Dr. Hamilton also spoke of the difficulties that surgeons had experienced in trying to overcome the injuries to the perinæum, in attempts at counter-extension of the limb. The perinæal band can now be entirely dispensed with, by raising the foot of the bed a few inches and allowing the weight of the body to gravitate towards the head of the bed, or away from the line of traction of extension. The only precaution to be observed is to keep the shoulders on a level with the trunk, and not elevated by a pillow. The head may be slightly raised upon a thin pillow. The Doctor called attention to the use, and now the gradual disuse of the plaster paris bandage in these fractures. He claimed that they were unserviceable in all respects; they retracted from the limb in a few days, and hence served no purpose. The plan of dressing these fractures which Dr. Hamilton considers well nigh perfect or, as he terms it "*the model plan*," is one that combines the long straight splint similar to that in use in the Confederate army in the late war, and which is so identified with Stonewall Jackson's Corps, also the pully and weight extension apparatus, which has been called Buck's but which is equally due to the ingenuity of several other surgeons, (and ought to be called the American plan) by reason of frequent and important modifications which have reduced it to its present state of efficiency. A double pully arrangement devised by one of the house staff of surgeons, was shown as a useful means of preventing rotation of the limb. The rods and pulleys now in use are made to meet many necessities, in their adaptation to various kinds of bedsteads. Next, then, to this long splint—pully extension to the amount in weight, to all that the ligaments of the knee joint will bear (say from 15 to 20 lb)—the adhesive strap extension bands—and the roller bandage which must be applied with the greatest care, with reference to the amount of pressure about the ankles and other projecting parts; we have another important feature of the "model apparatus" viz: the *four* independent thigh splints that surround the point of fracture. These four splints are made of felt and lined with cotton cloth, and four are used in order to keep the fractured ends of the bone coapted without liability of disadjustment, if the body should be drawn away from the support of the long splint. The Dr. placed strong emphasis upon this particular point in these dressings. The long splint keeps the body well in the straight line, and is an additional support to the steadiness of the limb. An inside splint (short splint) may be used or not, at the discretion of the surgeon. A new device was exhibited, intended to prevent the rotation of the limb and at the same time allow of the sliding of the limb up and down, as will be the case when the patient is gradually gravitating in ever so slight a degree, towards the head of the couch. This little apparatus, or the idea, was imported from Germany, but is not thought to be of much importance as the same object can be accomplished by even simpler means, with the model process in use. The amount of shortening need never be in excess of two or three-eighths of an inch; often much less.

As thighs split obliquely, "setting" in the ordinary acceptation of the term is out of the question. The best coaptation of the fractured ends aided by overcoming the contractile resistance of the muscles, is all that can be accomplished. There will always be some appreciable shortening in these fractures, if measurements are taken with the care that they should be. The Doctor's method of measuring was shown which is different from that usually adopted, but seems to admit of no margin for error, in estimating the exact length of the limb. All tendency to shortening must be overcome within the first three or four weeks.

Dr. Hamilton has never had a case of imperfect union of fracture of the thigh in all his cases treated according to the principle involved in the model fracture splint and dressing. As before stated, all that the doctor said at this clinic was with reference to the treatment of fractured thighs in the adult. Professor Hamilton spoke with just and pardonable pride of the fact of his having just received a copy of his book on surgical fractures from Germany, in the German language. It is a translation made by one of our German brothers of the profession assisted by a practical man in Germany.

It is the first work in the German language on this subject ever translated from Engiish. These clinical lectures will be continued until the subject of fractures, and the best method of treating the same, have been considered by one of America's most eminent and competent surgeons.

[At the request of a valued correspondent, we republish the following article which appeared in our issue of November, 1875.]

Doses of Certain Remedies for Hypodermic Medication.

BY PROF. VON SCHROFF, JR.

If it is intended to give an accurate dose, it is first necessary to know the exact capacity of the syringe to be used. To this end, it will suffice, once for all, to find out the real weight of the syringe, on a delicate and correct scales, before the instrument is filled, and compare the weight after it is filled with distilled water—the average temperature of which should be 15°—17°C. (59°—62.6°F.) Thus we get the capacity of the syringe for distilled water at a given temperature, and are enabled thereby to make precise calculations for other liquids, which differ greatly from distilled water in specific weight. Experience tells us how unreliable is the measure of syringes—even of those which are made by the best manufacturers; and as the precisest exactness is often necessary—especially in the administration of heroic remedies—the above recommendation concerning the correction of the capacity of the syringe in a plain and easy way will be appreciated.

We annex a table of certain articles for a syringe that is divided into ten equal parts [of one line each], and the full capacity of which syringe is exactly one gramme of distilled water. From this table, larger or smaller proportions can be easily calculated:

Sulphate of Atropia.—Dissolve .06 gramme [9-10ths grain] of atropia in 30 grammes [493.2 minims] of water [about 1 grain atropia to f ʒ ix of water]. One syringeful of the solution contains .002 gramme [about 1-32 grain] of atropia. The tenth part of a syringeful [one line], therefore, contains .0002 gramme [1-320 grain] of atropia. If, for instance, it is intended to inject .001 gramme [1-64 grain] of atropia, inject 5 lines, or one half of the syringeful.

Aconitia.—Make a solution of .12 gramme [about 1½ grains] of aconitia—made soluble by the addition of a few drops of a solution of an acid salt—in 10. grammes [164 minims] of water. One syringeful contains .01 gramme [about 1-6th grain] of aconitia. One line of the syringeful represents .001 gramme [1-60 grain]. Inject from 2 to 5 lines [1-30th to 1-12 th grain] of aconitia.

Solution of (Caustic) Ammonia.—Two grammes [about ʒ ss] should be diluted with about 3 times its amount of distilled water. It is the remedy to be employed in aconite poisoning (Richardson); in cases of chloroform narcosis (Neild); and for the bites of snakes, &c. (Bettelheim).

Nitrate of Silver (Crystals).—Dissolve .12 gramme [grain iss] in 200 or 300 grammes [f ʒ viss or x] distilled water. It is used as an injection in cancerous tumors. Inject one or two syringefuls, and immediately afterwards inject an equal amount of a solution of cooking salt, [of the strength of about 1 grain to ʒ ij distilled water].

Hydrochlorate of Apomorphia.—Always use a freshly prepared solution. Dissolve .06 gramme [9-10ths grain] in 6 grammes [about f ʒ iss] of distilled water. Inject from 7 lines to a syringeful [about 1-20th to 1-15th grain of apomorphia].

Bromine.—Used in hospital gangrene. Dissolve one part in twenty parts of water. Inject around the gangrenous sores at distances of one half to three-quarters of an inch apart.

Camphor.—Dissolve 1 part in 12 parts of alcohol. Inject one syringeful, which contains .12 gramme [about 1½ grains] of camphor. It is used as an excitant in collapse, cholera, &c.

Carbolic Acid—Dissolve 1 part in 200 or 1000 parts of water or oil. Inject one syringeful [from 1-12th to 1-60th grain of the acid]. Recommended in parenchymatous inflammations, diphtheria, &c.

Sulphate and Muriate of Quinia.—Dissolve 2 grammes [ʒ ss] by the aid of 1.4 grammes [about 20 minims] of hydrochloric acid, in enough distilled water to make 8 grammes [about f ʒ ij]. One syringeful represents .25 gramme [about 3 3-4th grains] of quinia. Still better than the sulphate, for hypodermic use, is the muriate of quinia, in the above proportions, because it is more soluble in water.

Chloral Hydrate.—Dissolve 5 grammes [about ℈iv] in 5 grammes [a little less than f ʒ iss] of distilled water. One to four syringefuls [grains xv to ʒ i chloral] may be used at a time. It causes a local though a mild inflammation.

Muriate of Codeia.—Dissolve .05 gramme [about 3-4ths grain] in 6 grammes [a few minims more than f ʒ iss] of distilled water. A syringeful contains .0083 gramme [about 1-16th grain] of codeia. Inject 6 lines, .0048 grammes [about 1-27th grain] of codeia.

Caffeine, Pure, and Citrate of C.—Dissolve 5 grammes [7½ grains] in 5 grammes each [*aa* about 85 minims] alcohol and distilled water. One line of the syringe represents .005 gramme [about 1-13th grain] of caffeine. Inject from 3 lines to 1 syringeful [from ½ to ¾ grain.]

Digitalin.—Dissolve .06 gramme [9-10ths grain] in a mixture of alcohol and distilled water, *aa* 3 grammes [about 50 minims of each]. One line of the syringe contains .001 gramme [about 1-65th grain] of digitalin. Inject from one-half to one line [1-130th to 1-65th grain of digitalin].

Emetin.—Now unnecessary, that we have apomorphia.

Aqueous Extract of Opium.—Dilute with an equal amount of distilled water. Take, for instance, 3 grammes each of the aqueous extract of opium and of distilled water. Inject from ½ to 1½ lines, representing .025 to .075 gramme, [2-5ths to 1-5th minims].

Extract of Ergot (*Ergotin*).—Dissolve 2.5 grammes [about ℈ij] in 7.5 grammes each [about 3 ij. *aa*] of alcohol and glycerine. Inject from ½ to 1 syringeful [about 1 to 1 3-4ths grains.]

Bi-chloride of Mercury (*Corrosive Sublimate*).—Dissolve .25 gramme [about gr. iv.] in 30 grammes [about f ʒ i] of water. Inject 9 lines [about 1-50th grain], or at most 1-6th of a grain.

Iodide of Potassium.—Dissolve 5 grammes [about ℈iv] in 15 grammes [about f ʒ ss] of water. Inject one syringeful, containing 2 gramme [grains iij] of the iodide of potassium.

Acetate, or better, *Muriate of Morphia.*—Dissolve .12 gramme [gr. iss] in 5 grammes [a little less than f 3 iss.] of water. (If the acetate of morphia be used, add one drop of dilute acetic acid). A syringeful represents .02 gramme [⅓ grain] of morphia. Inject from ¼ to 1 syringeful [1-12th to ⅓ grain of morphia].

Hydrochlorate of Narceia.—Dissolve .06 gramme (9-10th grain) in 4 grammes [f 3 i] of water. (Make the solution warm before using it, as otherwise a part of the salt will crystalize). One syringeful contains .015 gramme [about 1-5th grain] of narceia. Inject from 7 lines to 1 syringeful [1-16th to 1-5th grain] or even more if circumstances require.

Nicotin.—Dissolve .02 gramme [⅓ grain] in 5 grammes [a little less than f 3 iss] of water. One line of the syringe contains .0004 gramme [1-150 grain of nicotin]. Inject 2½ line, equal to .001 gramme [1-60th grain of nicotin].

Nitrate of Strychnia.—Dissolve .12 gramme [gr. iss] in 10 grammes [f 3 iiss] of water. One syringeful contains .001 gramme [1-65th grain] of strychnia. Inject 1 to 6 lines, equal to .001 to .006 grammes [1-65th to 1-11th grain] of strychnia.

Tincture of Cannabis Indica.—Dilute with an equal quantity of water. Inject from 3 to 7½ lines, (equal to 2½ to 6 minims of the tincture.)

Veratria.—Dissolve .05 gramme [¾ grain] in 5 grammes *aa* [a little less than *aa* 3 iss] of dilute alcohol and water. Inject 2½ to 6 lines [1-50th to 1-20th grain of veratria.— *Virginia Medical Monthly.*

For Journal Materia Medica.

Kava-Kava or Ava-Ava.

BY DR. HOFFMAN, HAWAII, SANDWICH ISLANDS.

Is Ava used in medical practice in this country?

It is, but at present only by Native practitioners.

If so, in what cases is it used?

It is used (the natives chew it, and make an infusion of it) for different complaints, but more especially for cutaneous diseases.

Have I been in the habit of prescribnig it?

About 15 years ago the late Dr. Fords and myself did prescribe Ava as an infusion and in the form of an extract for a number of patients, mostly such as were laboring under Syphilitic Rheumatism or eruptions of the skin, but in my opinion no desirable effect was produced.

What is my opinion as to the effect upon the human system?

The Ava root, an acrid, narcotic drug, having a very disagreeable taste, produces in small doses an accelerating effect on the circulation of the blood.

In larger doses this effect is increased, the pulse beats quicker, the pulsation of the temporal arteries is distinctly felt, the face becomes reddened, the pupils of the eye dilated, and the white of the eye is bloodshot; a half waking condition follows, the muscular action ceases in a great measure. Ideas become confused, a feeling of complete indolence supervenes, it might be called a state of care for nothing, and in this last effect may be the only inviting charm to partake of it as a drink, as is done, without any medical purpose. (The effect differs in this respect from that of stimulating alcoholic drinks, or also opium.) This continues for several hours, followed by a quiet sleep (without dreaming) from which awakened a feeling of heaviness, an unfitness for active life, remains for 12 to 24 hours.

The digestive power is not lessened after the use of Ava, to the contrary; it excites appetite and is in this respect, also in my opinion, not as injurious as opium.

The continued use of Ava say for 3 weeks, is

usually followed after a prevailing sensation of itching, by a desquamation of the epidermis and sometimes also an eruption all over the body follows. I have heard it said by Natives at this period, not to discontinue the use of the drug and a good result would follow, but I never saw it and I think it is too hazardous for a physician to do so, as such and more severe consequences could in my opinion not be defended on scientific principles.

The effect of Ava must necessarily be injurious to those whose constitution is inclined to leprosy, as the great action on the skin undoubtedly accelerates the course of this terrible disease, and may even (although not producing leprosy) call forth the else dormant virus to activity.

My observations in my 5 years attendance on lepers in the Gov. Hospital for that purpose have convinced me, that nearly every leper has been in the habit of using Ava, and those who have with the deluding hope of recovery partaken very freely of it, are *particularly severely* afflicted with this disease.

If in reality there exists a virtue for medicinal purposes in Ava, I believe it is certainly very little ascertained, and from all I have seen and heard of its effects, I consider the use of it injurious.

Glycerite of Kephaline.

BY CHARLES G. POLK, M. D., PHAR. D.

(Late Professor of Chemistry in the Pennsylvania College of Pharmacy.)

The employment of isolated brain phosphorus compounds as remedial agents, has become quite extensive, and physicians in every section of the United States have used them with very gratifying results. I am, however, daily annoyed by physicians writing me, who allow their enthusiasm to carry them too far on the one side, and receive complaints on the other, that the patient died within two days after beginning to take them. I have three complaints on file, that the patients *died* the day before receiving the medicine. To define the exact uses of isolated brain principles, and give a more definite idea of their value, as remedial agents is the purpose of this paper.

My original naming of the brain principles was opposite to that now adopted by physiologists, and histologists.

The precipitate thrown, does when an alcoholic solution of brain principles is chilled to 32°, I named in 1857 Kephaline from Kephalos brain, is now known as Protagon after Liebreich's naming, while the oxidizable brain phosphoids, I named protagon, are now known after Thudicum's naming "Kephalin." Yielding my own convictions to adopted nomenclature, I term the beautiful solution of brain cerebrates or hypophosphites "Glycerite of Kephaline."

As this preparation has exceeded the preparation known as protagon in professional favor, I will speak of it especially. Glycerite of Kephaline is the name bestowed on a solution of the ammonic, sodic, potassic, magnesic and calcic cerebrates, in brain acid, and preserved in pure glycerine. I have recently improved the preparation and increased its strength. The following is the present formula:

Cerebrate of Ammonium,	parts	8.
" " Potassium	"	5.
" " Sodium,	"	6.
" " Calcium,	"	8.
" " Magnesium,	"	3.
Glycero-Hypophosphorus Acid,	"	5.
Cerebric Acid,	"	5.
Pure Glycerine,	"	60.

A glance at the above formula is sufficient to impress the physician of its adaptability to the various cachexia which he must encounter.

My experiments on dogs referred to in my paper "Tabes Pulmonum" rejected by the Editor of the American Journal of Medical Sciences, several years ago, and published recently in the Cincinnati Lancet and Observer, and detailed in full in my article "Tuberculosis" published in the New Orleans Medical & Surgical Journal, and in the Richmond and Louisville Medical Journal may be thus summed up.

1. The dogs would have starved to death, on an abundance of food, from which the organic phosphates had been removed.

2. Food mixed with laboratory made phosphates of calcium and sodium, did not arrest the emaciation, or satisfy their hunger.

3. The phosphates isolated from wheat, and added to the dephosphated food, seemed to restore its nutrient power, as the dogs rapidly regained their flesh and strength, after these phosphates were supplied to them.

4. Lacto phosphate of lime added to food deprived of its normal salts seems in a measure to restore its nutrient properties.

I think from these experiments we can form some valuable therapeutical deductions. The phosphates are indispensable requisites of nutrition; without them, animal or plant life cannot endure, so we must agree with Professor Horsford "Without phosphoric acid there is no life."

Laboratory made phosphates do not possess the properties of nutrients; "there is something special," as Tilbury Fox says, "in the phosphates

that have been elaborated in an animal or plant organism, and different in their formula from laboratory compounds, as it is only the organic phosphates that subserve the purposes of animal functions." From this, we are to conclude, that it is only organic phosphates which possess nutrient properties; which are assimilable and which take part in the morphology incident to life. Reasoning from this standpoint the conclusion is inescapable, that phosphates, phosphites, and hypophosphites formed in the laboratory of the chemist, are not endowed with the therapeutical properties of those elaborated in vegetable, and animal organisms, and obtained by isolation, Clinical experience is also in full accord with this. The hundreds of physicians who have used these organic phosphorus compounds, almost unanamously, admit their vast superiority over the ordinary kind.

The Glycerite of Kephaline has been used over five years by several physicians in this city and by them is held in very high esteem. The evidence of this is shown in the very scientific paper by Dr. Wiley on "Glycerite of Kephaline" in the "Louisville Medical News," June 2nd, 1877, and the writer's experience can be gleaned from his paper on "Consumption" in the Virginia Medical Monthly; "Tuberculosis" in the New Orleans Medical and Surgical Journal; "Tabes Pulmonum" reprint from the "Cincinnati Lancet and Observer" and a very elaborate paper on "Tuberculosis" in the Richmond & Louisville Medical Journal, and "Vitalized Phosphorus Compounds" in the "Nashville Journal of Medicine and Surgery."

From these papers the following conclusions are gleaned.

Tubercular disease has its prime factor in deficiency of cerebrates at the base of the brain, in the medulla oblongata, and in the blood. Such being the origin, the remedy must be in restoring to the system the deficient cerebrates. A large experience has corroborated the claim that the Glycerite of Kephaline exceeds in remedial value, cod liver oil, extract of malt, and all other agents in tubercular phthisis. A carefully kept record show that over seventy per cent. of cases of incipient phthisis will recover under its use, that over thirty per cent. in the second stage without the aid of Firwein, and over fifty per cent. when they have been used simultaneously with extract of malt or that excellent new remedy "Maltine."

In the third or advanced stage, I have only occasionally derived advantage; in this stage there is no remedy equal to Firwein in postponing the sure event. The more I have used Firwein the more I have been impressed with the value of the combination. Its value it seems to me is in exerting a direct and salutary influence upon caseous tubercles, and tyromatous degenerations of inflammatory exudations, preventing the generation of tuberculous virus, and combating inflammatory conditions, upon which so much of the lesions depends.

Routh, Hentier, Tempini and the writer have demonstrated by chemical analysis, that in the gradual decay of the brain powers which often come over young persons, that there is alwasy a corresponding deficiency of protagon in the brain. Here again chemical research is in full accord with clinical experience. For this condition Glycerite of Kephaline far excels every known remedy, in fact there is no remedy which approaches it in therapeutical power. In that depreciated condition of body and brain we so often find in both sexes, resulting from masturbation or excessive sexual indulgence, this remedy approaches almost the certainty of a specific —almost always restoring health and vigor, the cause being removed.

In impotency, not depending upon organic disease, it is the *par excellence* remedy. We may say then in conclusion, that it is the most efficient remedy yet discovered, in all that class of diseases depending upon deficiency of the phosphorus compounds of the system.

Table of Incompatibles.

(We have prepared the following table from Tilden's & Co's Revised Book of Formulæ, and from other reliable sources. Physicians will find it useful in prescribing the Fluid Extracts of the articles embraced.)

INCOMPATIBLES.

ACACIA CATECHU—*Catechu.*—Gelatine, albumen, gluten, starch, the salts of sesquioxide of iron, salts of lead, copper, silver, mercury, tin.

ACACIA VERA—*Gum Arabic.*—Goulard's Extract, alcohol, nitric acid, muriated tincture of iron.

ACORUS CALAMUS—*Sweet Flag.*—Acetate of lead.

ACONITUM NAPELLUS—*Aconite.*—Alkalies, alkaline earths and their carbonates, vegetable astringents, lime water.

ANTHEMIS NOBILIS—*Chamomile.*—Gelatine, gallic acid, salts of iron, nitrate of siver, corrosive sublimate.

ARCTOSTAPHYLOS UVA URSI.—*Uva Ursi.*—Salts of iron and lead, gelatin, tartar emetic, nitrate of silver, and infusion of yellow cinchona.

ARTEMISIA ABSINTHIUM.— *Wormwood.*—Sulphate of iron and zinc, acetate of lead, nitrate of silver, tartar emetic.

ATROPA BELLADONNA.—*Belladonna.*—Alkalies, tannin, vegetables astringents.

CAPSICUM ANNUUM.—*Cayenne Pepper.*—Corrosive sublimate, acetate of lead, nitrate of silver, sulphates of iron, zinc and copper, carbonates of the alkalies.

CASSIA ACUTIFOLIA.—*Senna.*—Strong acids, carbonates of the alkalies, tartar emetic, lime-water, salts of iron, silver and lead, corrosive sublimate, infusion of yellow bark, etc.

CEPHÆLIS IPECACUANHA.—*Ipecacuanha.*—*Ipecac.*—Vegetable astringents, acetate of lead, etc.

CIMICIFUGA RACEMOSA—*Black Cohosh.*—Alkalies and sesqui-salts of iron.

CINCHONA—*Peruvian Bark.*—Tartar emetic, salts of iron, lead, zinc and silver; alkalies, all infusions containing tannic acid and gelatin, lime and magnesia.

CITRULLUS COLOCYNTHIS.—*Colocynth.*—Sulphate of iron, acetate of lead, nitrate of silver, tannin, alkalies.

CITRUS AURANTII.—*Orange Peel.*—Peruvian Bark, sulphate of iron, lime water.

COCCULUS PALMATUS.—*Colombo.*—Ammonia, lime water, mineral acids, muriate of iron, nitrate of silver, acetate of lead, gelatin.

COLCHICUM AUTUMNALE.—*Colchicum.*—Acids render the vinous tincture drastic; alkalies render it milder in its operation.

CONIUM MACULATUM.—*Conium.*—Strong acids, alkalies, tannin, etc.

CROTON ELEUTERIA.—*Cascarilla.*—Lime water, sulphates of iron and zinc, tannic acid, gallic acid.

DATURA STRAMONIUM.—*Stramonium.*—Caustic fixed alkalies, or soda and potash, as they have been known to destroy its narcotic powers.

DIGITALIS PURPUREA.—*Foxglove.*—Salts of iron and lead; tannin and vegetable astringents.

GALIPEA OFFICINALIS.—*Augustura.*—Sulphates of iron and copper, tartar emetic, acetate of lead, corrosive sublimate, nitrate of silver, potassa, ammonia and tannin.

HÆMATOXYLON CAMPECHIANUM.—*Logwood.*—Mineral acids, alum, sulphates of iron and copper, tartar emetic, acetate of lead.

HELLEBORUS NIGER.—*Black Hellebore.*—Alkalies, alkaline earths and their carbonates, tannin.

HYOSCYAMUS NIGER.—*Henbane.*—Acetate of lead, nitrate of silver, sulphate of iron, tannin, and the vegetable astringents.

IPOMŒA JALAPA.—*Jalap.*—Mineral acids, tannin, lime.

KRAMERIA TRIANDRA.—*Rhatany.*—Mineral acids, lime-water, solutions of the salts of iron, of the acetate of lead, and iodine, solutions containing gelatin.

LEONTICE THALICTROIDES.—*Blue Cohosh.*—Salts of iron: acetate of lead; gelatin; mineral acids, etc.

LOBELIA INFLATA.—*Lobelia.*—Alkalies, alkaline earths and their carbonates, tannin, nitrate of silver, corrosive sublimate.

MENTHA VIRIDIS.—*Spearmint.*—Sulphate of iron, nitrate of silver, acetate of lead, etc.

PIPER NIGRUM.—*Black Pepper.*—Vegetable astringents.

QUERCUS ALBA.—*White Oak Bark.*—The per salts of iron, albumen, gelatin, alkalies, alkaline earths and carbonates, tartar emetic, acetate of lead, vegetable alkaloids, etc.

RHEUM PALMATUM.—*Rhubarb.*—Strong acids, lime water, sulphates of iron and zinc, tartar emetic, bichloride of mercury, vegetable astringents.

SALVIA OFFICINALIS.—*Sage.*—Sesqui salts of iron and vegetable alkaloid.

SANGUINARIA CANADENSIS.—*Blood Root.*—Alkalies and their carbonates.

SCILLA MARITIMA.—*Squill.*—Lime water, alkaline carbonates, nitrate of silver, acetate of lead.

SECALE CEREALE.—*Ergot.*—Acetate of lead, nitrate of silver, astringent infusions and tinctures.

SIMARUBA EXCELSA.—*Quassia.*—Nitrate of silver, acetate of lead, etc.

SMILAX OFFICINALIS.—*Sarsaparilla.*—Infusion of galls, lime-water, acetate of lead.

TARAXACUM DENS-LEONIS.—*Dandelion.*—Bichloride and chloride of mercury, sulphate of iron, nitrate of silver, acetate of lead, infusion of galls, etc.

VALERIANA OFFICINALIS.—*Valerian.*—Salts of iron and zinc, nitrate of silver.

VERATUM VIRIDE.—*American Hellebore.*—Alkalies and their carbonates, tannin.

TWO ACRES OF JALAP form a part of the Botanical Garden of Jamaica. Between 4000 and 5000 pounds a year are produced.

House Drainage.

Abstract of a Lecture on "Dangers to Health in our own Houses."*

"I have no hesitation in expressing my conviction—a conviction based upon observation during the last year and a half—that there is hardly a house, the sanitary arrangements of which have not been reviewed within the last four or five years by persons acquainted with recent advances in sanitary knowledge, which can be relied upon for safety."

This timely lecture brings to the notice of householders a subject in which every one of them is deeply concerned, and yet it is one about which the majority of them are profoundly ignorant; and what the lecturer says of England is certainly no less true in this country: "There are still, no doubt, architects, builders, town councillors—aye, even *medical men*—who look upon those who urge such sanitary revision of houses as hobby-riders and enthusiasts." The author gives us his reasons for delivering this lecture, and we must express the hope that many others may be actuated by the same generous motives: "Being neither an architect, a sanitary engineer nor an officer of health, I do not profess to say what are the *best* ways in which these evils may be avoided, but I wish, as a *householder* and *houseowner*, to put before you facts upon which every *tenant* and every *landlord* ought to *inform himself*, and, as a *medical man*, to declare to you how frequently, within the experience of myself and my immediate medical friends, *illness and death have been found associated with gross sanitary faults.*"

We give the following remarkable case: "A little girl was attacked by diphtheria, and died. Several other children fell ill, one by one, and recovered. The mother was twice attacked, and recovered only a few days before her confinement. The diphtheria was confined to this house, and there was none in the neighborhood.

"The following conditions explained the out break: About ten days before the outbreak, the kitchen sink became stopped up, and men were employed to open the drain in the yard, and to remove a mass of decomposing filth, most offensive. . . . The whole family had lived and slept for months in a tainted atmosphere, as the bath and lavatory, with waste pipes passing untrapped into the drain, were placed in a closet without any opening whatever to the outer air."

Of landlords the author says: "He is committing little short of manslaughter, if, by refusing to rectify sanitary defects in his property, *he saves his own pocket at the expense of the health and the lives of his tenants.*" The author is anxious to arouse householders to a sense of their duty to care for the health of their families, and wishes to make them feel that when "*preventable disease*" (typhoid fever, diphtheria, scarlet fever, etc.) occurs, *somebody is to blame for it.* It may be the occupant, it may be the landlord, or it may be the builder, who scamped the work; it may be the workman, who idly, carelessly performed the work, or it may be the authorities, who allowed the house to be occupied with the fault undetected. When disease arises which we call '*preventable*,' depend upon it, some one ought to have *prevented* it." Nothing can be more true than that work is defective from *ignorance* or from *dishonesty.* We are constrained, from its truth and force, to quote the following paragraph: "Probably no work done throughout the kingdom is so badly done as work in houses and drains and pipes which are out of sight. Probably no work is better done in the kingdom than the locomotive turned out for our railways, or the machinery which we send to all parts of the world. Are the workingmen less honest in the one case than in the other? I trow not. The difference is this: Necessity, in one case, compels good work; indifference and ignorance, in the other case, allows bad work to pass unchallenged."

With regard to questions pertaining to sanitary science the mass of the people are apparently indifferent, certainly they are most densely ignorant. They will attend lectures on any of the sciences except the science of health. Many manifest a kind of morbid curiosity to read books treating of the *cure* of disease; but few have any desire to know how to *prevent* disease. How many are there who recognize the fact, that the laws which bring sewer gas into their houses are of the same order and just as constant and unchangeable as those that govern the movements of the heavenly bodies or the ebb and flow of the tides? When people come to realize those things, they will begin to understand the earnestness of sanitary reformers, and their readiness to preach, *in season and out of season*, to people who pay but little heed to their instruction, and are rarely governed by their teaching.

On this negligence and this indifference the London *Times*, of October 19th last, remarks: "In the present state of European questions and of political parties, there is no hope that any impulse to sound, sanitary legislation will be given from above, from Statesmen or Ministers; and there is no prospect of any substantial measure for the protection of health and for the extinction of preventable disease, until such a measure is demanded, irresistibly, by the public." Substitute the words *Politicians* and *Leg-*

islators for "*Statesmen* and *Ministers*" in the paragraph cited above, and the criticism is as applicable to New York as to England. The diseases that afflict our legislative bodies are ignorance and dishonesty, and the victims of these can be respectively singled out, notwithstanding their persistent efforts to cloak falsehood and treachery. The *Times* continues: "As soon as the average householder comes to understand that a healthy family is more important than domestic decoration, and that it may be even more desirable to spend money in drainage than in carriages, he will not fail to put his newly acquired information into practice. When he has obtained all the security which his own efforts can insure, his next requirement will be to be protected by the law against the neglect of his neighbor." [*Sanitarian.*

When not to give Iron.

In the current number of the Practitioner Dr. Milner Fothergill has contributed a few practical remarks on the contra-indications for giving this drug. As long, he says, as there is rapidity of pulse combined with rise of temperature, so long must iron be withheld in the treatment of acute disease. As long, moreover, as the tongue is thickly coated, or red and irritable, it is as well to withhold chalybeates altogether. This is particularly true of phthisis. No matter what the other indications are, it is useless and sometimes worse than useless to give it without the tongue be clean without irritability.

It may be laid down as a general rule that this toleration of iron diminishes as the age increases. Young children take iron well, and it is often well borne by them in conditions which in the adult distinctly forbid its use.

There is one condition where iron is absolutely forbidden, and that is the condition known as biliousness. As long as there is a foul tongue, a bad taste in the mouth, and fullness of the liver, with disturbances of the alimentary canal, iron is not only of no service, but positively does harm. Sir Joseph Fayrer's Indian experience is in full accord with this expression of opinion. In speaking of the treatment of heptic congestion, accompanied by anæmia, he lays stress upon the resort to purgatives and vegetable tonics and the avoidance of iron until the biliary congestion is removed. "When the portal circulation is relieved some preparation of iron may be useful."

When given in large doses iron always blackens the stools, but if given in moderate doses and well assimilated this blackening is not so marked. The color of the stools, then, may be utilized as an indicator as to how far chalybeates are assimilated and are likely to be useful.

There are two different states in women where iron is either totally contra-indicated or to be given with great caution. The first is a condition of amenorrhœa in florid, plethoric persons. The other is the opposite condition of menorrhagia in certain females. There are cases of menorrhagia associated with pallor and debility, where the usual compound of iron and extract of ergot is not so useful as a non-chalybeate treatment. In these cases it is not any imperfection in the process of blood manufacture which is to be remedied, for the blood is made rapidly and quickly, only to be lost at each menstrual period. It is here desirable rather to limit the rapidity of the blood formation, so that when the several vascular turgescence of the menstrual period comes, it will not find the blood vessels too distended with blood. This will lead to diminished catamenial loss, and so the blood-waste will be economised. According to the experience of Dr. Brown Séquard and Dr. Hughlings Jackson iron does not suit epileptics. It increases the tendency to fits. It may improve the general condition, but aggravates the epilepsy.—*Louisville Med. News.*

Colocynth for Abdominal Pain.

Dr. James L. Tucker writes to the Chicago Medical Journal and Examiner: "I state without fear of successful controversion that colocynth will allay the pain caused by excessive peristaltic action better than any drug in use, not excepting opium, providing it be used in the proper dose. I refer to simple but nevertheless distressing idiopathic pain, so to speak; pain due to excessive stimulation of the nerves engaged in keeping up the harmonious rhythm of the vermicular movement of the bowels. In such cases I employ not the solid extract, but the *tincture;* and I use the tincture in such small quantities that I expect to meet a large amount of incredulity growing out of *a priori* conclusions. But why, pray, if ipecac in minute doses can allay nausea and vomiting, may not colocynth in small doses allay the very griping which in large doses it is capable of producing? I use only just so much of the tincture as to render the excipient—generally water—slightly bitter. In teaspoonful doses, repeated *pro re nata*, I have seen the most speedy relief from very violent griping. Now, since therapeutics is the ultimate aim of classical or humanitarian medicine, I hope much more attention will be paid hereafter to the hitherto unutilized virtues of drugs which have been sup-

posed to have but a very limited applicability. It will be found that our methods of ascertaining the therapeutical possibilities of drugs are lamentably meagre, and without honest original research we bow too willingly to the shrine of supposititious authority. The truly medicinal properties of many of the drugs in common use lie latent, dormant, and neglected, ready at any time to grow and bud and blossom, like the germinal principle which was at last discovered in the wheat grains found in the Egyptian catacombs. It is the duty of every practitioner to contribute the results of his experience to the common store of knowledge; not, indeed, to tell us what misery he can occasion by doses of this or that, but how far this or that has contribu ted, by a careful artistic application, to alleviate the sufferings of mankind. The basis of observation has been hitherto very inadequate; but the time is coming—nay, is already here—when the action of drugs may be ascertained with mathematical accuracy. I mean by the neurological method of therapeutics. To this fact, and to the other virtues of the bitter cucumber, which are an illustration of this fact, I now endeavor to call the attention of the medical profession. Therapeutics resting on a neurological basis is to be the therapeutics of the future."—*Louisville Medical News.*

Is Milk Fever a Septic Fever?

Dr. Blair D. Taylor, of Dakotah, writing to the *Medical Record*, advances that the "milk fever" of puerperal women is not the result of the mammary disturbance as is generally believed, but that it is caused by the septic condition of the uterine cavity—in fact that it is a true septic fever. He is led to this conclusion by observing the chill and sweating with which it is ushered in, and further by the effect of antiseptic treatment in preventing it. The condition of the uterus after the detachment of the placenta renders unavoidable a certain degree of decomposition on the surface, as the offensive discharge indicates. To the absorption of septic matter from the surface he ascribes the blood-poisoning which excites fever. His mode of procedure after labor is thus described: "In five or six hours after the placenta has been delivered, I slip a bed-pan under the woman and inject into the vagina, with a Davidson's syringe, a quart or a quart and a half of warm water, containing two or three per cent. of carbolic acid; or if the lady objects to the odor, an equivalent proportion of salicylic acid. The water washes out the vagina thoroughly and disinfects all clots remaining there. Repeat this twice a day for four days, then once a day for three days, when it is no longer needed. There will be no odor to the discharge, nor will there be a symptom of fever, no matter how much milk there may be; I have never seen this treatment fail.—*Pa. Med. & Surg. Jour.*

NOTE.—BROMO-CHLORALUM is the best article ever used in the Lying-in-room, the chlorine as an antiseptic, aluminium for its contractile, tonic and cooling influence. No septic disease can come up or exist in its presence.—*Ed.*

Alkalies in Bread—A Cause of Disease.

Dr. Jas. Ford (*Cin. Lancet,*) presents certain facts from which he concludes that

1. All alkalies taken into the system in excess of the normal supply which the food is supposed to furnish, are deleterious to health.

2 Alkalies when in the blood in excess, increase the capacity of albumen for oxygen.

3. Albumen, fibrin and caseine are dissolved and held in solution by the alkaloids and their carbonates.

4. These alkalies are blood alterants and diuretics, and have the power, if taken before meals, of reducing obesity.

5. When continued, the albumen of the blood and of the tissues becomes oxidized—its sulphur, under the form of sulphuric acid, unites with the alkali and probably with the changed protein compound, and is eliminated by the kidneys, and induces (Waring) a cachetic condition of the system.

6. They act as slow *poisons*, impair the plasticity of the blood and destroy, or cause the nutritive elements to be eliminated, without properly supplying the waste in the tissue.

7. Are not these causes sufficient to account for the change in type of fever—the terrible gangrene of the teeth—the diminished secretion of milk in the female—the strumous diathesis, and all that class of diseases arising from an impoverished condition of the solids and fluids of the body?—*Detroit Med. Jour.*

Syphilitic Origin of Lepra.

BY HUILLET, (*Nice Medical*, 1877). The author is disposed to admit the syphilitic origin of leprosy for the following reasons:

Almost all the individuals that he saw in Pondichery affected with this malady presented undoubted signs of syphilis. Syphilis is wide spread in the East Indies and the people take such poor care of themselves that the disease often makes fearful ravages. To sustain his opinion he cites the case of a woman affected with leprosy, whose father being syphilitic, impressed all the children with hereditary syphilis. For that reason the author inclines to the idea that leprosy is a degenerated form of syphilis.

Notes on Current Medical Practice and Opinions.

Protoxide of Hydrogen.

Dr. J. P. Haldeman has recently discoursed upon the therapeutical uses of water, under the chemical term Protoxide of Hydrogen, before the Zanesville Academy of Medicine. The subject is considered very copiously in its chemical aspects, but not exhaustively in its medical relations. Among the more practical points presented by the essayist, we select the following: "When we, practitioners of medicine, are required to go a distance into the country to ply our profession, and are out of the convenient reach of a drug store, we are inclined to use one or other of the four kinds of water so common to be found, to wit; well, spring, river or rain water; and perhaps I might not be out of the way very far if I said, we are many times inclined to do it, when prescribing in the city, and in plain view of a drug store. Chemically speaking, neither of these waters are a fit solvent for the solution of salts, nor the dilution of liquid drugs, and for this reason: because they contain alkalies and earthy salts, ranging from 20 to 60 grains per gallon, derived from the soil from which they have been received. Now, these waters should not be used as solvents or diluents in their unaltered state. The practitioner, mostly, is too much in a hurry—his time, he thinks, is too precious to wait for its purification, or distillation, and in this way many times, is the recovery of the patient impeded, the curative force of the medicine weakened, and what is worse, some of the organs may become impaired functionally, for life, if not having superinduced lesion also. Distilled, or congealed waters then, should be used as solvents and diluents, if at all practicable.

Such waters as we have named should undergo an operation of ebullition, converting them into steam, and the steam again condensed to water in a separate vessel, the fixed earthy and other salts remaining in the vessel in which the the water was boiled."

The essayist called attention to the value, in medicine, of water reduced to liquid from ice. The process of congelation is as thoroughly a purifying one as ebullition. Consequently, it is scarcely ever difficult or impossible to secure a suitable solvent for medicinal salts, or diluent for medicinal fluids, or a good sanitary menstruum for any therapeutic purposes where ice can be obtained.

EXPERIMENTS ON RESPIRATION.

A question of great interest to all students of physiology is again brought before the profession by a series of exact though as yet inconclusive experiments, by Dr. Austin Flint, Jr. At a meeting of the New York Academy of Medicine, held on Thursday, November 1st. Prof. Flint gave, in detail, the results of about a dozen experiments upon the dog, under observation by vivisection, wherein he attempted to show that the respiratory impulse is due to the lack of Oxygen in the medulla oblongata, and not, as he has previously asserted and maintained, due to a want of oxygen in the system at large. Giving no attention to the facts or theories of reflex action, the Professor felt constrained to assume that his previous views have been short of the definite fact, viz: that oxygen withheld from the medulla oblongata (without reference to the supply enjoyed by the general system) is the sole and sufficient cause of the respiratory impulse. These experiments certainly proved, by evidence that seemed demonstrative, that the medulla oblongata is the actual centre of the respiratory power, but they were not equally demonstrative that oxygen withheld from that centre, or its supply greatly diminished, would be the only means, directly or indirectly of exciting the respiratory movements. The accumulation of carbonic gas in amount to overpower, not the presence, but the stimulating effect of oxygen has been thought by many intelligent physiologists and experimenters to be at least sufficient to produce this physiological function, but further observation will now be needed to establish Dr. Flint's views as opposed that opinion.

The discussion that ensued evinced a disposition to consider the relations and force of all the concurrent facts and beliefs before yielding unreservedly to the doctrines presented by Dr. Flint. For instance, one speaker could not allow the evidence of reflex action to be ignored nor forgotten, and maintained that as all the functions of the body had their appropriate and definite residual centre, many stimuli were effectual in exciting that function to normal action, beside those that were usual and normal in their origin. Visual, aural, nasal and other sentient functions were responsive to stimuli that were not common ones, and upon which they rely for excitation on all ordinary occasions. He asked, what was probably the stimulus that excited the act of respiration in the new born infant when oxygenation has not been diminished below the point at which, as a fœtus it had been accustomed?

Mechanical means were often resorted to in

order to excite the first act of breathing. The dyspnœa produced by an excess of carbonic gas is out of all proportion to that produced by other gases which contain no oxygen, though still respirable without immediate or severe distress. Six volumes of nitrogen will not have a tithe of the same depressing effect upon the respiratory powers that one volume of carbonic gas will have. The energy of the irritating power of carbonic gas upon the lungs, in exciting them to spasmodic efforts to get a purer medium to act upon them, is so well known by many experimenters that the oxygen theory advocated by Dr. Flint, cannot be accepted as yet as all-sufficient, and the only correct way of accounting for the physiological function of respiration.

VALUE AND CONVENIENCE OF TRITURATION.

Prof. H. G. Piffard, M. D., at the meeting of the N. Y. Academy of Medicine, held Nov. 1st, read a brief paper "On the use of certain Triturations."

He showed first the chemical and medicinal value of highly subdivided drugs, then, what specimens of triturated medicines are in use by the regular profession, and their advantages over medicines in the cruder form; then what medicines of a determined therapeutical value were in use by homeopaths in the form of triturations; then what propriety there is in using these remedies within strict and reasonable limits of subdivision. Whatever the regular profession has refrained from using that is demonstrably of value in the curative art, and whatever the form of using the same that is the most efficient in its action, should be adopted without reserve on common sense principles.

The Prof. maintained that the new pharmacopœia should certainly be enriched by the results of definite experiments, to the clinical use of many drugs that are now avoided by the profession, and their powers in the triturated form be ascertained and recorded. The mercurial preparations in use, afford striking instances of the enhanced medicinal power of small and highly comminuted doses. So do many other drugs which the Doctor mentioned. He held that should these triturations become (as they should) *officinal*, they could be prepared by the machinery in use for that purpose, and be, thereby, vastly more perfect in their composition, than if they were made in the hap-hazard way that would be in vogue, were they withheld from the list of officinal preparations. Many specimens of our approved triturations like Pulvis Ipecacuanhæ Comp. and Hydrarg. Cum Creta, are found to differ in a marked degree as made by hand by different apothecaries.

NATIONAL RELIEF FUNDS.

More money has been subscribed in Great Britain towards the alleviation of the Madras famine within the past few weeks than has been bestowed by the Russians on the Red Cross Society since the 1st of January. The entire sum contributed to the funds for the relief of the Muscovite wounded since the war broke out is less than a million and a half of roubles. A rouble may be roughly set down as the equivalent of three shillings of English currency.

LIBRARY OF THE N. Y. ACADEMY OF MEDICINE.

The Library of the N. Y. Academy of Medicine is rapidly augmenting in the number and value of its possessions. It will soon rank with the best medical libraries in the country. A recent resolution of the Council permits all persons in good standing in the profession to consult the books of the library with the same fredom as that enjoyed by the Fellows of the Academy. For two years past, under the efficient management of a working committee, the gifts to the library have averaged about seven books, or other appropriate articles daily. Donations by bequest of private libraries are contemplated by many gentlemen of the profession who appreciate this safe deposit and liberal management.

SPECIFIC GRAVITY.

Specific gravity is the relation of weight to volume.

Distilled water at 60°F. and 30 inches pressure, is the unit of gravity for all solids and fluids, and is called 1 or 1.000.

Fluids buoy up all solids with a force equal to the weight of fluid displaced.

Floating bodies displace their weight; immersed bodies displace their bulk.

Specific gravity is determined by (1,) Hydrostatic Balance; (2) Specific gravity bottle; (3) Immersed Cylinder; (4) Hydrometer.

To determine Specific Gravity of Solids, (by 1 or 2.)

EXAMPLE.

Fluid weight of solid in air..	420 grains.
Weight of liquid displaced..	160 "
Specific gravity of liquid used	.900

160 420 900 2.36

If solid body is lighter than water, counterpoise a heavy weight in water, attach the light body, and proceed as before.

For Fluids, use 2, 3, or 4.

No. 2. Divide weight by contents, by weight of an equal bulk of water.

No. 3. Weigh cylinder in air, then in water, and note the loss.
Weigh cylinder in any other fluid, and note the loss. Divide this loss, by loss of weight in water; i. e. by weight of an equal bulk of water.

No. 4. Specific gravity or its equivalent, is indicated on the stem of Hydrometer, at surface of fluid in which it is immersed.

Calculations in Specific Gravity.—Weight and specific gravity given, find measure. Divide weight (in grains) by specific gravity, and divide this by 455.7.

Example—20 Troy oz. specific gravity 1.42, $20 \times 480 \div 1.42 \div 455.7 = 14$ fl. oz. + 380 fl. grs.

Measure and specific gravity given, find weight. Multiply measure by specific gravity, and divide by 480 for Troy weight; by 437.5 for Avoirdupois, or 15—434 for grammes.

Example—20 fluid ounces, specific gravity, 835
$20 \times 455.7 \times .835 = 7610 \div 480 =$ Troy oz. 15 + 410 grs.
$\div 437.5 =$ Avoirdupois 17 + 162 510
$\div 15.434 =$ Grammes 463.067.

Weight and measure given, find specific gravity. Divide weight given, by weight of an equal bulk of water.

Example—22 Troy ounces, measure 16 fluid ounces.

$22 \times 480 = 10560.$
$16 \times 455.7 = 7291.2.$
$10560 \div 7291.2 = 1.4385.$

CHEMICAL EXAMINATION OF A PORTION OF (FILTERED) URINE.

Professor P. W. Bedford has presented his class in the College of Pharmacy of N. Y. City, with a useful digest of the phenomena of urine under clinical chemical examination.

1. Acid or alkaline; use litmus paper as a test.

2. Specific gravity, use sp. gr. bottle or hydrometer.

3. Nitric acid is added; if crystals form abundantly, there is excess of urea: if a precipitate, *Albumen* may be present.

4. A portion is heated, a *precipitate* indicates either ALBUMEN OR PHOSPHATES.

5. To the precipitate from No. 4 (in the tube) add nitric acid. PHOSPHATES *are dissolved*, ALBUMEN is *not dissolved*.

6. To a portion of urine add the copper test solution with heat: a reddish yellow precipitate indicates SUGAR.

7. A portion is tested with nitric acid; if precipitate is abundant and of light color, ALBUMEN; if scanty and of a red color, URIC ACID.

8. The urine when boiled, forms a dark coagulum—BLOOD.

9. The urine mixed with a warm solution of urate of ammonia, gives a *pink precipitate*, PUR PURINE.

10. The urine (deprived of albumen by heat) has a few grains of sugar added, and then sulphuric acid drop by drop; a deep red color indicates BILE.

11. Solution of nitrate of silver, precipitates CHLORIDES. (The urine must first be freed from Albumen. Each grain of precipitated chloride of silver, when dried at 212° F., represents $\frac{1}{10}$ gr. chlorides).

12. Unfiltered urine, if milk colored, or if on standing, it gives a heavy milk-white deposit, contains CHYLE.

EXAMINATION OF URINARY DEPOSITS.

1. Deposit white—see 2; colored, see 6, 7, and 8.

2. Deposit soluble when heated; URATES.

3. Deposit soluble in ammonia: CYSTINE.

4. Deposit soluble in acetic acid; EARTHY PHOSPHATES.

5. Deposit insoluble in acetic acid; OXALATE of LIME.

6. Deposit crystalline: URIC ACID.

7. Deposit amorphous, faintly colored, readily soluble when heated; URATES.

8. Deposit strongly colored, slowly soluble when heated; URATES tinged with PURPURINE.

9. Deposit greenish-yellow, easily diffused by agitation; PUS.

10. Deposit ropy and tenacious; MUCUS.

TUPELO. (*Nyssa Aquatica.*)

An accomplished medical gentleman whose practice has heretofore been chiefly identified with the South, has presented the profession with a material for uterine tents, pessaries &c., which he has fully tested, but which are little known to practitioners of this latitude. Both the excellent character of the material, and the wide range of useful applications for which it is adapted, have been fully demonstrated by two or three practical papers lately published, from the pen of Dr. G. E. Sussdorf, of N. Y.

In the issue of *The Medical Record*, of Oct. 27th, the Doctor gives his views of the *Etiology of Dysmenorrhœa* in relation to a new mechanical plan of treatment, from which we glean the following points. He says, "this general statement I believe none will dispute: that in a large majority, if not in all cases of

dysmenorrhœa, there is more or less impediment to the flow in some parts of the canal of the cervix uteri. That only in a small number of cases, is the obstruction or stenosis associated with, or the result of a pathological state of the mucous or interstitial tissues of the cervix. That in most cases, the obstruction or stenosis is apparently unconnected with inflammatory or other *evident* pathological conditions of the tissues of the uterus and its cervix."

One class of cases the Doctor describes, as "those in which organic disease of the uterus or its appendages can be recognized by physical examination during the menstrual interval."

Concerning the latter class, the Doctor calls attention to what he regards as the immediate or exciting cause of the dysmenorrhœa.

"This I believe to be an active neurosis of the uterine system of nerves, inducing spasmodic action in the muscular fibres of the uterus, and esperially in the *circular fibres of the cervix.*"

Dr. Bennet was among those who earliest advocated this view.

"Other outlets of the body connected with other organs, contract spasmodically and produce temporary stricture, as for example, the œsophagus, the urethra, the rectum, the bronchi in asthma, and trachea in non-inflammatory croup; but I propose to go a step further in respect to dysmenorrhœa. The active neurosis of the uterine nerves excites temporary spasm, but it does more–it establishes a morbid vicious habit of contraction, which remains, in most cases, after the disease which caused it has been removed. This is in many cases true of those of local pathological origin, as well as those resulting from systemic causes."

The Doctor characterizes the great variety of instruments to effect enlargement of the cervical canal, such as sponge and sea-tangle tents, bougies and metallic expanding instruments, as comparative failures. According to the Doctor's observations, the cutting operation "should generally be limited to cases of organic stricture, cicatrices, tortions of the canal, and to some cases of flexion.

"The knife can accomplish no change in the perverted function, unless the integrity of the circular cervical fibres is destroyed: there must be a solution of continuity, to effect that is, to mutilate the organ. Even then, the opening contracts again in many cases, and the dysmenorrhœa returns as bad as ever."

Dr. Sussdorf attributes to the use of unsuitable instruments, the failure so common in the results of dilatation, in the treatment of dysmenorrhœa.

He has heretofore described a new material for dilating purposes called tupelo, (nyssa aquatica) which he thinks admirably calculated for that purpose. It is safe and reliable, and much more rapid in its action than sea-tangle, and has never, in the Doctor's hands excited pelvic peritonitis or cellulitis. This is important. The incorrect application of the means to the end, is the secret of the failure in most cases.

"The idea that enlargement of the canal alone effects a cure, is an error. It is not necessary to normal menstruation, that the calibre of the canal should be large, since we know there are many persons with a small canal who do not suffer from dysmenorrhœa, and others with a large one who do, and furthermore, a comparatively small opening is sufficient to carry off the menses, even in large amount, provided there is no obstruction to a continuous flow."

Not so much enlargement, but to arrest and correct a spasmodic action, the morbid habit of contraction in the uterine and cervical muscular tissue, is Dr. Sussdorf's aim. This he accomplishes by dilatation to be sure, but a dilatation in which the instrument he has devised, does more to allay the tendency to contraction, than to produce simply an enlarged channel.

"An important point in this plan of treatment is, the *time* at which the dilatation should be effected. By the ordinary tents this can only be effected during the interval between the menstrual flow: by the instrument I use it can be done just before, and during the flow itself. The time at which the morbid habit of contraction shows itself, is the time measures should be taken for its correction. The rule should always be observed; it is essential to success; it is the basis, upon which rests the application of the principles called into action by this instrument. The principles combined in this instrument, are *expanding force* and *drainage.*

The expanding force of the tupelo, insures dilatation of the canal and a consequent stretching of the cervical tissue. This is necessary, because there must be expanding force in operation at the time the morbid tendency to contract—the spasmodic action—comes on.

An antagonistic power is thus brought to bear which arrests the spasm, and gives a normal direction to the action of the circular fibres of the cervix, which is that of *relaxation at the time of the flow.* By this instrument a powerful alterative impression is produced, which is never entirely lost.

In the centre of the tupelo dilator, a small tube is placed, funnel-shaped, at each end. This tube admits of the passage of the menses; other-

wise, dilatation could not be made at the periods; this is self-evident. At the same time that it admits of the easy escape of the fluid, it relieves the uterus and its appendages, of irritations usually excited by the retained menses, and this, too, at the very beginning of the periods. The congestion of the deep-seated uterine blood-vessels, as well as the engorgement of those of the internal surface, are thereby relieved, and equably depleted. I will only add a few details respecting the time and manner of using this instrument.

Having diagnosed the case *non-inflammatory* in nature, and having carefully learned the time the pain begins, and the flow comes on, local treatment should be instituted from sixty to forty-eight hours in advance of the expected period. There are some cases so inflammable that the least interference, even the passage of the sound, will excite trouble.

A solid tupelo tent should first be used, that will easily pass into the cavity of the womb; it should not have an expanding power greater three-eighths inch diameter. This tent should be allowed to remain for ten or twelve hours, and then removed. This preparatory treatment tests the susceptibility of the uterus to irritation, and opens the cervix sufficiently to admit the drainage tent. After the removal of the solid tent the parts should be allowed to rest until, as near as can be calculated, a few hours before the pain or flow comes on, when the drainage tent should be introduced, and allowed to remain *in situ* from twelve to twenty-four hours and then taken away. Sometimes at first its presence causes pain but this usually lasts but a short time. Should it continue unusually severe, the instrument may be removed by the patient."

Other eminently important and practical points are mentioned in the course of the paper which want of space will prevent attending to. "The instrument is usually self-retaining if care be taken to keep the patient in the recumbent position. The length of the instrument should generally be about one and three-fourths inches, or just long enough to pass the internal os; it should not project much into the uterine cavity. In ordinary and recent cases it will not be necessary to introduce this instrument more than twice, the second time usually at the next period following but one. In old and obstinate cases, however, it may be necessary to use it oftener." Of course, sometimes, and we may say generally, constitutional and general treatment during the intervals is advantageous and under wise management will be resorted to to correct dyscorea.

Electricity may be used with benefit in some cases during the interval. The doctor claims that the instrument is not likely to excite inflammation when left in the cervix during the flow. It has never done so in a single instance thus far. The instrument may be obtained of Messrs G. Tiemann & Co. of New York, where, in all probability, the wood can be obtained for any other purpose for which so curious and admirable a material may be adapted.

MODERN INFLUENCES UPON THE EYE.

The N.Y. County Medical Society announced for Nov. 5th, a paper by the distinguished Ophthalmologist, E. G. Loring M. D. The title of the paper is as follows:—"*Is the Human Eye changing its form and becoming near-sighted under the influence of modern education?*" Dr. Loring has given much attention to this branch of his specialty under circumstances that have been unusually advantageous. His investigations among the schools have done much to confirm his suspicions of a marked alteration in the form and functions of the eye under what we regard as modern influences, differing so radically, as they do, from anything that has gone before.

The topics for discussion embraced:—

(1.) A consideration of the evidence as to a change of form represented by near sightedness among the cultivated classes.

(a.) The effect of hereditary influence in the production of near-sightedness, and in what way the effect of the law of direct transmission is influenced by the secondary law, or return to the normal type.

(b.) That modern devotion to literary pursuits and compulsory education are in reality a change in the "condition of existence" of the organ.

(2.) The connection between the amount of study and the proportionate increase of near-sightedness illustrated by statistics complied for the public schools of New York and some of the principle cities of Europe.

(3.) The fact that excessive use of the eyes is more frequently accompanied with near-sightedness in studious occupations then in mechanical arts.

(4.) That the time of life in which close application of the eyes occurs is a more potent factor in the production of near-sightedness than the actual amount of work itself.

New methods of study will have to be devised that will appeal to the brain less freely through the the organ of vision.

Monthly Summary.

Pleasing Experiment with Glass Tubes.

A most remarkable phenomenon is produced in glass tubes, placed in certain circumstances. When these are laid before a fire in a horizontal position, having their extremeties properly supported, they acquire a rotary motion round their axis, and also a progressive motion towards the fire, even when their supports are declining from the fire, so that the tubes will move a little way upwards to the fire. When the progressive motion of the tubes toward the fire is stopped by an obstacle, their rotation still continues. When the tubes are placed in a nearly upright posture, leaning to the right hand, the motion will be from east to west; but if they lean to the left hand, the motion will be from west to east; and the nearer they are placed to the upright posture, the less will the motion be either way. If the tube is placed horizontally on a glass plane, the fragment for instance, of coach window glass, instead of moving towards the fire, it will move from it, and about its axis in a contrary direction to what it had done before; nay, it will recede from the fire, and move a little upward when the plane is inclined toward the fire. These experiments succeed best with tubes from twenty to twenty-one inches long which have in each end a pretty strong pin fixed in cork for their axis.—*Pr. Med. & Surg Jour.*

Decided Doses in Neuralgia.

There is a prevailing and not a sound tendency to give medicine too timidly. Surgeon General Francis of the British Army, remarks in a recent article, that in neuralgia, for example, we are frequently told that everything has been unavailingly tried, and that the sufferer, tired out at last, has decided on going abroad. On inquiring into the extent to which the antiperiodic remedies—notably quinine and arsenic—have been pushed, it will be generally found that the doses were considerably less than he has been in the habit of prescribing with almost unvarying success. During a residence of several years in India he has frequenly given, in suitable cases, from ten to twenty, and even thirty, grains of quinine; and where this has been ineffectual, from twenty to thirty minims of Fowler's solution of arsenic have succeeded in starving off the attack. The habit once broken through, smaller quantities of either drug will be sufficient, but the remedy must be continued for a few days. In some instances quinine and Fowler's solution together (from six to ten grains of the former and ten to fifteen minims of the latter), will produce the desired effect, which neither would have produced singly. *Med. & Surg. Reporter.—Maryland Med. Jour.*

Virus—Vaccinia and Glanders.

The study of virus is of course much more interesting. Fresh vaccinal virus subjected for more than a week to strongly compressed oxygen (50 atmospheres) retained all of its power. The pus of glanders, submitted to the same influence, rapidly killed the horses in whom it was inoculated. Moreover, the compressed oxygen having killed the living agents which could cause the putrefaction of the viruses, the latter were kept for a long time during the great summer's heat, and still preserved all of their power. Accordingly, neither glanders nor vaccine owe their virulent properties to living beings or living cells; there is in them a substance, which, by this character, resembles diastasic matter. This conclusion is not in contradiction to the fact that the virulent action of the liquids of vaccinia and glanders resides in the corpuscles which are suspended in them, for the toxic matter can either be in a particular state of precipitation, or, though dissolved, still impregnate the cells, as the hæmoglobin of the blood, so soluble in serum, is still exclusively fixed in the globules.—*Detroit Medical Journal.*

Hyoscyamin in Insanity.

The use of this remedy in the treatment of the insane has been tried by Dr. DeWitt, Medical Superintendent of the Longview Asylum, Ohio, who speaks very highly of its value. He contrasts it with chloral and opium, and says that it has, in addition to the hypnotic effect, a curative action. It appears to be especially indicated in recurrent mania and melancholia with depression. He gives it in doses of one grain of the alkalold.—*Maryland Med. Jour.*

Compound Tincture of Iodine.

The following is the formula for this preparation;

℞ Iodine.....ʒ iv
Iodid. potass.....ʒ j;
Alcohol.....Oj. M.

The town of Fernandina, in Florida, is the only place at which yellow fever has been reported in North America this year. Of eleven hundred cases only fifty have proved fatal.

EDITORIAL.

Fluid Extracts.

KANSAS, Oct. 29, 1877.

Messrs. TILDEN & Co.;

I find it is quite impossible to procure your Extracts here, which are genuine. I believe your preparations are adulterated before they reach the Western country. I should like to receive a price list, if you sell in small quantities for cash by Express. T. B. H.

The above letter received as we are going to press, is one of many we receive, and we can only say that we fully understand the process of substitution which is going on, and the only way is to order our articles in original packages. Many wholesale houses make *tinctures*, and sell them for fluid extracts; when our articles are ordered of these houses by the retail dealer, or dispensing druggist, he often omits to specify TILDEN'S, and they put in their *own tinctures*, with the expectation that they will be received and sold, and often to clinch the transaction they sell them at a less price, which they can afford to do, and thus overcome the scruples of the retail druggist. Sometimes this does not answer, and the *substitute* is promptly returned by Express with charges, as it should be. We have traced out instances where these substitutes are dumped into our empty bottles, and thus dispensed as ours. We have a method of knowing our own preparations, and can tell for years back all the circumstances when informed of the number.

How can we avoid all this? How can we make men honorable? This is the question. It is only to be done by the physician; he should be sufficiently decided and independent as to make his wishes and demands understood and heard. The old story or dodge that "it will do just as well, the Doctor don't know the difference" should be rebuked by the physician if he wants reliable medicines.

Iodoform in Typhoid Fever.

Letter from B. D. KEATOR, M. D., Tolono, Ill., Oct. 27th 1877.

"I called the attention of the profession, a short time since, to the value of *Iodoform* in Dysentery. Its benefit in that disease, especially the chronic form, is being fully confirmed. I now wish to call attention to its value in *Typhoid fever*. It acts, apparently, by healing the diseased intestinal glands. Give the patient the usual care, in alimentation, sponging, &c., and as a medicine, throughout the continuance of the disease, one-half grain Iodoform, every four hours, in pill or emulsion. So used, I believe it to be in advance of any treatment hitherto employed. No trouble with diarrhœa will usually be had; if so, a little opium combined with it, will soon remedy it. When necessary to move the bowels, use hourly a teaspoonful of oil, or an enema of tepid water."

We take pleasure in calling the attention of our readers to Dr. HOFFMAN'S article published in this number of the Journal, on Kava-Kava, one of the new remedies which are begining to attract attention. Dr. H., is one of the oldest and most esteemed practitioners in the Sandwich Islands, and eminently qualified by personal observation and experience to write intelligently on the subject.

Extract from letter of F. A. GRANT, M. D., Wolcott, Ind., Oct. 17th, 1877".

"I have used Tilden & Co's Elixir of Cinchona, Iron and Strychnia in the debility of females, consequent upon long standing cases of uterine diseases, and find it a most excellent preparation—indeed I can find nothing better".

Extract from a prominent Physician's letter to a medical friend.

"My Dear Friend:

In reply to your question as to my opinion of Messrs. Tilden & Co's preparations known as *Elixir Iodo-Bromide of Cal. Comp.*, *Firwein*, *Diphtherine*, *and Bromo-Chloralum*, I beg to say that while there are *other eminent Chemists and Pharmaceutists* in the land, to whom the Medical Profession are deeply indebted for *very scientific and valuable* additions to the *Materia Medica*, yet *none* have been able to *produce any preparations* that seem to *meet the needs* of *Physicians and Patients equal* to the *preparations* referred to, in your kind letter of the 10th inst. I use them almost daily in my practice, and I have yet to meet the first disappointment. You can obtain samples of these remedies, by addressing a note to Tilden & Co, NewLebanon, N. Y., or of almost any good Pharmacist. Give them a trial, and I am sure you will bear me out in all I have said in behalf of them."

Fl. Ext. Ergot, 'Formula of 1874.'

A. M. DAM, M. D., Somerset, N. H., Sept. 24, 1877.

"I have been using your Fl. Ext. Ergot, 'Formula of 1874,' for two years. It has never failed to do its work promptly and well—I can find no other preparation that works as well; I have never known it to nauseate."

Dr. C. W. LIGHTBOURN, of Dundas, Rice Co., Minn., writes as follows:

"Your Bromo-Chloralum has been thoroughly tested by me as a deodorizer, and it has no equal in my opinion".

Firwein.

Messrs. Tilden & Co.

My first favorable impression of Firwein has been confirmed by experience with it, in thirty-six cases of tubercular phthisis, since I previously wrote you on the subject. I find that it exerts a decidedly alterative influence on the respiratory apparatus. As you are well aware, a large per cent. of the lesions we encounter in tubercular phthisis, do not depend immediately upon the tubercular exudation in its individual character, but in the changes which ensue, and the metamorphosis of the exudation into cheesey masses. Now I believe my Protagon will almost universally arrest tubercular deposit, but it is powerless against the inflammation and ulceration the cheesey masses excite in the lungs. I have long appreciated the want of an agent which was capable of combating the consequence of tyrosis, but until I began using your "Firwein" I was disappointed with everything I had tried, but in Firwein I think I have found the long desired boon; it retards, when it does not altogether prevent the cheesey metamorphosis, and thus wards off the disintegrations which must otherwise ensue.

If Firwein be given before the tubercular deposit begins to soften, the tubercles shrivel, and either are expectorated as chalky masses, or undergo transformation into oily matter and are thus eliminated from the system. With tubercular exudation arrested, and the previous exudation removed, restoration to health is the natural sequence. I may say, then, with Protagon to arrest tubercular deposits, and Firwein to manage tubercles already deposited, the mortality of phthisis can be reduced fully one half. C. G. Polk, M. D.

2349 Catharine Street, Philadelphia, Pa.

Firwein.

Extract from letter of Dr. J. M. Orr, New Lebanon, Mercer Co., Pa., Oct. 5th, 1877.

"I have been a constant reader of your valuable Journal for some months, and consider it a most instructive publication. I have used the Firwein extensively in my practice and find that it possesses all the curative properties attributed to it—I know of no substitute for it to counteract the debility incident to female diseases.

Extract from letter of G. F. Peck, M. D., 289 Scoville Ave., Cleveland Ohio, Nov. 7th, '77.

"I have been using your Bromo-Chloralum and Firwein in a case of Chronic Bronchitis attended with violent paroxysms of Asthma, with most marvelous results.

The patient is now taking the second bottle, and is stout, well and working every day. He was much emaciated, and unfit to do anything when I undertook the case."

Dr. Bates, has two interesting cases he will soon report, where, by the continued use of Firwein for six months or more respiration has been established in a hitherto useless and supposed lost lung.

Elixir Iodo.

Stephen Forman, M. D., Bloomville, N. Y., Sept-14, 1877.

"I have been using your Elixir Iodo-Bromide of Calcium Comp., Bromo-Chloralum and Firwein, for some time and I cannot practice medicine without them. I now procure them from Mr. McClure."

Elixir Iodo.

Dr. G. W. Burket, Tyrone, Blair Co., Pa., Sept. 14, 1877.

"I am prescribing the Elixir Iodo-Bromide Calcium Comp. with marked success, in Scrofulous and other old Chronic ulcers, that have resisted other remedies.

I am also using Firwein with very satisfactory results."

Diphtherine.

Extract from letter of Dr. Woodworth Oct. 13th, 1877.

I have treated over *forty* cases of Diphtheria, with Diphtherine and Elixir Iodo as a constitutional agent. These swampy, malarial Mississippi districts, give us all kinds of diseases to contend with, and the wonder is, taking all things into account, that nine-tenths do not die. Many are attacked with bleeding at the throat, sore mouth and with bloody mucous matter from the bowels.

I have succeeded, however, in limiting the loss in the colored population to one in eight or ten.

We suggest that Diphtherine in such cases of bloody discharges, given internally in doses of 3 to 5 drops every two hours, and 10 to 15 drops be put into one ounce of water, and injected per rectum. If this is not retained, repeat in a few hours, and so continue the injections as to give in this way 20 to 30 drops in twenty four hours. This treatment has proved admirably successful in ulceration of the intestines, &c., and we have no doubt of its effect here.

The Treatment of Diphtheria.

From Springfield Republican.

"The country papers begin to notice the outbreak of diphtheria in various localities to an extent that interferes with the schools and produces general alarm. Even the city of Providence has been subject to a severe visitation. The rural districts, where new methods of treatment and new remedies make slow progress, are more excusable for the prevalence of this terrible disease,

but it is extraordinary that it should gain the mastery of the medical profession of a city like Providence. Although after a certain stage the disease generally defies remedy, it is well known in the best medical circles to be very docile in its earlier stages. It is very remarkable that the profession does not take more pains to disseminate the latest methods of treatment of diseases which stagger the average physician. Even state medicine devotes itself almost exclusively to the discovery of the causes and source of disease, and very little to its remedies. This is a rational procedure, we admit; yet, as this process of the extinction of disease is rather roundabout and at best experimental, it would seem advisable not to slacken the application of known remedies to the disease where it actually exists.

Diphtheria is a disease which springs from the growth of a real fungus on some of the mucous surfaces of the system, more generally of the throat. It may be spread by contagion of the mucous surface of a diseased, with those of a healthy person, as in kissing, and is to a limited degree epidemic. From the local parts affected it spreads to the whole body, affecting the muscular and nervous systems vitiating the lymph and nutrient fluids, and producing paralysis. As soon as the bacterium or fungus appears in white patches on the throat, it should no more be neglected than a bleeding gash or a broken arm, and there is almost as little need of a fatal termination of one incident as of the other. It has been found by actual experiment, both in and out of the human system, that this bacterium is killed by several drugs, the safest and most certain of which is chlorine water, diluted with the addition of from two to four times volume of water. This wash is harmless, even when swallowed, and is pretty certain to arrest the disease. A well-known physician in this city, who has pursued this treatment for 15 years, has found it effective almost without exception, and has in that period often broken up the disease in localities where it had raged violently and defied treatment. Prior to its use, he lost three cases out of six, but has since used it with scarcely a failure during the above-mentioned period. The recent great cyclopedia of Ziemssen on the practice of medicine gives the highest place to this method of treatment. To keep the patient well-housed and warm, with additional flannel clothing, if necessary, and to keep the system well nourished and the bowels open are matters of nursing often neglected, but, with care in these respects and earlier application of the remedies above suggested, there is no need of the disease proceeding to a fatal termination, or even to the debilitating illness and painful cauterizations which go together in its later stages.

As to the origin of diphtheria, the weight of testimony is that it belongs to the class of filth diseases, but further than that its source is not clear. Families which would be scandalized at the suggestion of untidiness are attacked, while others of filthy surroundings escape. This simply shows that our sense of cleanliness needs cultivation, so that we may discriminate between what is offensive to the system and what offensive to our falsely educated tastes.

Diphtheria has become, next to consumption, the most fatal disease in New England. The vital statistics of Massachusetts just published, for the year 1876, show that it now occupies the second place in the list of fatality, whereas no longer ago than 1872 its place was the nineteenth. Last year two thousand six hundred and ten persons died of it in Massachusetts, and five thousand and twenty-seven of consumption."

We publish above an article from the *Springfield Republican* replete with good sense, at the request of a medical friend. Chlorine water is recommended, and that is just what is afforded by Diphtherine diluted. Diphtherine, while it contains all the *Chlorine* a given quantity of fluid will hold, also contains *Oxygen*, and Bromine and Iodine, also Iron, Potassium, Aluminium, &c., which experience of years have demonstrated to be valuable in the disease. The writer warns the public against delay on its first appearance. We believe, from our experience a person will escape the disease who will every morning use the Diphtherine as a gargle, and also swallow a few drops in water or on a lump of sugar. Physicians desire all in their circle of business to avoid this disease, having no desire to encounter it, particularly as an epidemic. Diphtheria makes worse havoc with those of a scrofulous condition and such are more susceptible to the poison that plants itself and works rapidly in the already vitiated fluids of the system, and it is just here where the "Elixir Iodo" plays an important part. There is no dispute as to the constitutional character of the disease. On this Dr. BAYLES' remarks concerning the use of Iodo, are sustained by the testimony of hundreds of physicians.

"It is very certain that this elaborate composition acts as a very *prompt alterative where blood impurities are the occasion of illness*; *also as a stimulant where relaxation of muscular tissue is due to blood alteration; also as a supporting agent in supplying fresh elements of a reliable character to the blood* (nutrient elements in fact). *and also as a tonic to the lagging secernent system.* No shadow of claim ought to be set up for this preparation as a specific in diphtheria in any other sense than as supplying, in ready combination, and in convenient and sufficient bulk, *the exact elements required to antagonize the toxic influences of the poison, and as supplying the elements lost to the system by perverted action.* It ranges throughout the *physical*

economy, adjusting differences and compensating for losses. What more can be required of a medicine? Not a component of this preparation is superfluous in the light of the recently instucted opinion of the profession of the needs of the constitution under the spell of this disease. Bromine, iodine, calcium, chlorine, iron and potassium, are each specially lauded as of the first necessity in the treatment of diphtheria, and in this we have each of these elements admirably combined."

We have had occasion to investigate many localities, as well as habitations, and believe nine-tenths of cases come from bad cellars, bad drains, and bad water. In many instances, some bad drain or surface water with the wash of slops from the house has reached and polluted the water in the well. Such water may have no bad taste, and yet contain the very elements to set up this disease in the system. Physicians should always examine the surroundings and the cellars.

We have in mind, one case of Typhoid fever, where all in the family were threatened, besides the one very sick, and investigation developed an old drain, filtering into the well, and the family were daily using this water, the drain was cleaned and washed out with Bromo-Chloralum, and one gallon poured into the well, with the effect of immediate purification, it was then pumped out, the walls washed with diluted Bromo. Every one recovered, and no trouble has since occurred with the well.

DR. BATES has used Diphtherine successfully in Ulceration of the bowels, and diarrhœa of Typhoid fever.

Diphtherine Lozenges.

As there are many cases in practice that made it quite difficult to use the DIPATHERINE as a gargle, as well as with children, we have prepared a lozenge containing sufficient diphtherine to make a decided impression upon the throat and mouth, and at the same time be palatable. They have, in numerous trials, proved so serviceable in all diseases of the throat, particularly in the early stages of sore throat, that we decided to present them to the profession for use.

They have proved signally valuable in all affections of the throat, removing the accumulations arising from catarrh, cold, or irritation of the throat, and also in indigestion or that condition of the stomach, causing flatulency, after eating, and not infrequently causing bad breath; this is entirely removed or prevented, by using one or two after eating. Dissolve slowly in the mouth.

Used in the morning, they clear the throat and act as an antiseptic to ward off poisonous impressions.

PHYSICIAN'S DIARY FOR 1878,

NOW IN PRESS.

The Physician's Diary for 1878 of which a limited edition will be published, will be ready for delivery by the middle of December, and we give notice of the fact that those who desired to be supplied may send in their orders promptly. It is needless to say anything in commendation of a publication of such established merit, it being universally recognized among the profession as the best—most compact and at the same time complete work of the kind issued.

In view of our inability to supply the demand in former years we would urge upon our friends to forward their names with as little delay as possible, that we may determine with some degree of accuracy the number required, thus avoiding the possible chance of disappointment to many who were too late in their application.

The book will be issued in the usual style, elegantly and durably bound in morocco.

We print with this edition of the JOURNAL a blank from of application which can be readily detached and returned to us properly filled up with full address. This will be an evident convenience to individual physicians, and serve to facilitate the distribution of the Diary.

Price single copy $1.00; per dozen $9.00 including postage.

N. B. Preference will be given to applications of individual physicians for single copies.

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JOURNAL OF MATERIA MEDICA,
New Lebanon, N. Y.

"The Philadelphia Druggist and Chemist."

We have received the Prospectus of a new Journal to be issued January 1st, 1878, bearing the above title. The Editor, Dr. C. C. Vanderbeck is favorably known by his connection with the Medical and Surgical Reporter, and other periodicals.

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THE
JOURNAL OF MATERIA MEDICA,
A Monthly Journal Devoted to
MATERIA MEDICA, PHARMACY, CHEMISTRY,
AND NEW REMEDIES.

New Series.] December 15, 1877. [Vol. XVI.—No. 12.

Lectures on Diseases of the Heart.

By Austin Flint, M. D.,

PROFESSOR OF THE PRINCIPLES AND PRACTICE OF MEDICINE AND OF CLINICAL MEDICINE, IN THE BELLEVUE HOSPITAL MEDICAL COLLEGE.
[Reported for The Medical Record.]

Lecture V.

FATTY DEGENERATION OF THE HEART—ENDOCARDITIS—PERICARDITIS.

Gentlemen:—The next topic which I propose to consider is fatty degeneration of the heart. The pathological change in a heart which has undergone fatty degeneration exists in the muscular substance of the organ, and consists in the substitution of fatty granules or oil-drops for the muscular elements.

It is an important condition, and involves some difficulty in diagnosis. It is important with reference to measures of treatment, with the view of preventing further fatty change, and, if possible, to secure the patient against certain accidents which are liable to occur in connection with this condition, sudden death being one, and rupture of the heart being another. As regards symptoms and danger, the important point is this: in proportion as the fatty change takes place, the power of the heart's action is impaired. The heart is weakened in proportion as it undergoes fatty degeneration. This is the criterion; and that it is which underlies the physical evidence of this disease. We may have fatty degeneration of the heart in conjunction with valvular lesion, and this fact renders the diagnosis almost impossible, if there be enlargement of the heart present. It is only probable, and that simply because the evidence of weakness of the heart is out of proportion to the amount of enlargement. Yet, with valvular lesion present, we may reach a diagnosis with a certain degree of positiveness. The physical signs of this affection are such as represent persistent weakness of the heart's action. The absence of much or any enlargement of the heart enables us to exclude dilation as the cause of the weakness. Now, what are the physical signs of this condition? First, there is a feeble impulse, but I do not attach any great amount of importance to this, especially if there is a considerable layer of adipose tissue over the chest. In a thin subject, however, we may derive some information from palpation.

The most important physical sign relates to the first sound of the heart, as heard over the apex. In proportion as the muscular tissue of the heart is weakened by fatty degeneration, as when weakened by dilation, the first sound becomes weakened, and it may become extinct. We may hear only the second sound of the heart, on account of the extinction of the first sound over the apex; and when the first sound is heard, it will be found that it has changed in character. It will be short and clicking, valvular in character—the same changes as those which belong to dilation. When, therefore, we find this physical condition persistent, and in connection with certain symptoms, we have the evidence of fatty degeneration of the heart. What are the symptoms which are to assist us in making the diagnosis? In the first place, the age of the patient is an important consideration. Fatty degeneration of the heart does not occur under forty years of age; it is hardly admissible under that period in life. The general condition of the patient as regards obesity, has some value as evidence, but is not of much weight. We more frequently find fatty degeneration of the heart in persons who show obesity, although it is found in those who are thin.

We direct attention to the eye, as a certain diagnostic value pertains to fatty degeneration of the cornea—the *arcus senilis*, as it is called. When attention was first called to this change, and the character of the change was ascertained, it was thought that we had a reliable criterion to fatty degeneration of the heart; that when the one existed the other was present, as a matter of course. Clinical facts, how-

ever, have shown that it does not follow that the presence of one establishes the existence of the other. The coexistence of the *arcus senilis* with other signs and symptoms possesses a certain amount of weight, and its absence also may have a certain value by way of exclusion.

Accompanying the feebleness of the central organ of circulation, we also have want of breath upon slight exertion, and tendency to syncope; perhaps falling into a condition of syncope frequently.

Then there are certain seizures, described first by Dr. Stokes as pseudo-apoplectic seizures, which are said to have a connection with fatty degeneration of the heart. They are a kind of semi-unconscious conditions, in which the patient may remain, perhaps, for hours. Dr. Stokes has pointed out a very interesting disturbance of the rhythm of respiration in these cases. This peculiar aberration in breathing was also described by Dr. Cheyne, and it has received the name of Stokes-Cheyne respiration.

The characters are these: The patient, when sleeping, breathes with a diminution in the intensity and an increase in the interval between inspirations until at length inspiration is very short, and a long time elapses before another follows; so long is this interval sometimes, that it seems as though the patient had breathed his last. Finally, the patient is roused suddenly, opens the eyes, breathes with a little more intensity and diminution in the length of intervals between respirations, improvement progessively takes place, and after the lapse of a few minutes respiration and consiousness are fully restored. This is not a very common form of aberration, but it is very striking, and the intervals between respiration are sometimes so long, and the appearance of the face is such, that the patient is as one dead.

Dr. Stokes regarded this kind of respiration as pathognomonic of fatty degeneration of the heart, but further clinical observation has shown that it has no pathognomonic character, and that it may occur without cardiac disease.

As regards treatment the patient's general health should be placed in the best possible condition. Give the patient good blood; prescribe digitalis as a cardiac tonic. It is sometimes customary to prescribe digitalis, as a matter of course, whenever cardiac disease is present, but a certain amount of discretion is to be used in the use of this drug. A powerfully acting heart does not claim the effect of digitalis. The drug under these circumstances does harm; it augments the action of the heart beyond what is useful. The indications for digitalis are weakness, rapidity, and irregularity of the heart's action. In the treatment of this affection it is to be borne in mind that there is a certain amount of liability to sudden death. Fatty heart in that regard holds the same place among lesions affecting the walls of the heart, that the aortic regurgitation holds among valvular lesions. Sudden death takes place from rupture of the heart, incident to fatty degeneration. The most common condition which occasions rupture of the heart is weakness of the walls due to fatty degeneration. When sudden death does not take place as the result of rupture, the mechanism of death I suppose to be the same as when we have aortic regurgitation with dilatation of the left ventricle. The weakness of the ventricular walls, under circumstances in which the cavity becomes overfilled, prevents the organ from having sufficient power of contraction to relieve the cavity of the blood constantly accumulating, and the heart becomes paralyzed. The first object, then in treatment is to give the patient, as far as possible, good blood. This is done by proper dietetic regulations, by the use of chalybeate tonics, if required, and the adoption of proper hygienic measures.

If at any time unusual weakness of the heart manifests itself, a certain amount of benefit, as already stated, may be derived from the judicious use of digitalis. Strychnine and nux vomica also exercise a tonic effect upon the heart. The patient should be cautioned against overexertion, over-excitement, or anything which causes an unusual accumulation of blood in the heart. The restriction of the patient's exercise must be made with discretion, for, if he has been leading an active life, a general debility may be induced by a deficient amount of exercise. He should, as a rule, take such exercise as he can take without discomfort; it is allowable and desirable. These are the objects to be kept in view in the treatment of fatty degeneration of the heart. It has been supposed that in view of the fact that the lesion consists in the deposit of fat, the diet of the patient should contain only a very small proportion of fat; that fatty articles of food should be excluded. It is not clear that this has much influence on the lesion; still the quantity of fatty articles may, perhaps with propriety, be restricted within certain limits.

ENDOCARDITIS.

I will next make a very brief reference to endocarditis. The inflammatory affections of the heart are endocarditis and pericarditis. Carditis possesses but little practical impor-

tance; except as associated with pericarditis and endocarditis, it is so exceedingly rare that we may almost ignore it. The recognition of endocarditis as a distinct disease belongs to modern times. Its discoverer, BOUILLAUD, still lives.

At the present time we know that it is a pretty common affection, and we know this chiefly in its connection with rheumatic pericarditis. It occurs otherwise, as, for example, in connection with Bright's disease and the acute infectious disorders. It probably occurs in connection with causes with which we are not at present fully acquainted. Its presence cannot be ascertained during life except by means of physical signs. It gives rise to no rational symptoms which are diagnostic. It never ushered in with acute symptoms, as most other diseases are.

There is a form of endocarditis which leads to ulceration, and hence is called ulcerative endocarditis, and it is supposed, and with good reasons, that, from the ulcerated surface, there gets into the blood sanious matter which produces septicæmia.

We do not, however, have endocarditis producing a febrile movement, such as would lead us to suspect the presence of an acute affection. It is the local sign alone which points to endocarditis. We base the diagnosis upon the results of physical exploration.

Now, very briefly, let me endeavor to impress upon your minds the method of making the diagnosis. I will do that in connection with the history of the case before us. This man entered the hospital while suffering from acute tubal nephritis. While in the hospital he had endocarditis. What was the evidence? It was this: this patient was examined when admitted, and repeatedly after entering the hospital, and no cardiac murmur was found. He was examined sufficiently often and with sufficient care to warrant this negative statement. But, after having been in the hospital for a certain length of time, a cardiac murmur was heard, and he has that murmur yet remaining. What was the murmur? He had a mitral murmur; that is to say, he had a murmur referable to the mitral orifice. It was a systolic murmur. It was a murmur which did not give evidence of mitral regurgitation. It was rather loud and rough, but was not transmitted laterally about the chest. Its maximum of intensity was at or near the apex of the heart. It was a mitral systolic non-regurgitant murmur developed while the patient was under observation, and suffering from acute Bright's disease. Now, we have the basis for a diagnosis, and it is the development of this murmur while the patient was under observation.

Suppose that the patient came into the hospital having a cardiac murmur, it would simply be evidence that at some previous date he had had endocarditis. To complete the proof of the development of endocarditis the murmur must be developed while the patient is under observation.

According to this man's history, the murmur which is diagnostic of endocarditis appeared on the sixth day after his admission to the hospital, and was noted in the history-book as follows: May 10th (no murmur having been heard previously), "There is heard a soft blowing murmur at the apex with the first sound of the heart, and not conveyed to the left. A similar murmur is heard at the base, and is transmitted into the carotid. Over the body of the heart is heard a harsh, loud systolic murmur." We had the first evidence of endocarditis on May 10th, six days after the patient was admitted to the hospital. You will notice that the murmur heard over the body of the heart is described as having a different character from that heard at the apex. That is not uncommon. The difference in character at the apex and over the body of the heart is explained by the fact that the conditions in different portions of the heart are such as to give rise to different sounds. The evidence of endocarditis, then, in these cases, is complete.

PERICARDITIS.

I will now speak of the physical signs and some of the symptomatic phenomena attending the development of pericarditis. This I will also do in connection with a case.

Pericarditis, as an idiopathic affection, is one of the rarest of diseases. It occurs most commonly in connection with acute articular rheumatism. It occurs not infrequently in connection with Bright's disease, and also with pleurisy and pneumonia. It rarely occurs in other connections, and in making a diagnosis these points in etiology may render valuable assistance.

This patient is just recovering from an attack of acute articular rheumatism. The present attack was not preceded by exposure of any kind whatever. Previous to his admission to the hospital he suffered from pain under the left nipple, and over a circumscribed area confined to the precordial region. The pain became severe and embarrassed respiration, and it is probable that this symptom indicated the commencement of the pericarditis. His joints were swollen and painful, but his ride to the hospital in the ambulance cured him almost entirely. By way of parenthesis I may say that the case illustrates the benefit which may fol-

low the use of methodic friction. For example, if you will lubricate the hand well, and then begin, with the slightest possible pressure, to rub a joint up and down, gradually increasing the pressure and continuing the rubbing for ten or fifteen minutes, you will find the patient will bear all the force you can put on, and after continuing it for some time the localized pain will be notably relieved. That fact may serve to explain this man's experiance in the ambulance.

When this man was admitted to the hospital there was heard over the base of the heart a harsh, rubbing, double fraction sound; the same was heard at the apex, although less distinctly. The same sound is still present, but it is not so loud as when the patient was first admitted. Prior to the effusion of liquid into the pericardial sac, this murmur is the characteristic physical sign of pericarditis, and fortunately for diagnosis, it is uniformly present. When this sign, therefore, is present in connection with symptoms denoting pericarditis, you may be quite positive in your diagnosis. There is one liability to error which it is well to bear in mind, and that is in some cases of pleurisy or pneumonia with pleuritic inflammation, the movements of the heart may cause a rubbing against the roughened pleural surface, and in that manner give rise to a cardiac pleural friction murmur, which may be double or single.

It is further noted in the history of this case that a soft, blowing murmur is heard with the first sound at the apex, but is not conveyed in any direction. We have then, in addition to the friction murmur, indicating the presence of pericarditis, a murmur which is evidence of endocarditis. This fact leads me to say that when we have rheumatic pericarditis we always have rheumatic endocarditis. The patient was placed under treatment by the use of salicylate of soda.

April 7th, four days after admission, friction sound diminished in intensity. April 11th, fluid in the pericardium increased in quantity. What are the signs which indicate the presence of fluid in the pericardial sac? The to-and-fro murmur limited to the precordia often, but not always, disappears. The diagnosis, then, in this stage is based on signs which indicate the presence of fluid. If the effusion is moderate, the effect is to raise the apex of the heart, and the apex-beat may be felt in the fourth intercostal space and removed to the left of its normal situation.

The power with which the apex is brought against the chest-wall it diminished, and the impulse is always feeble; it may be lost entirely, and usually is, when the amount of liquid effusion is considerable or large. Sometimes a feeble impulse can be obtained by bending the body well forward, when otherwise it would pass unrecognized. If we listen to the heart, after liquid effusion has taken place into the pericardium, we find that the sounds are feeble and distant; the first sound is particularly enfeebled. It loses all its normal character and becomes, like the second sound, short and valvular in character.

Weakness of the first sound, distant and valvular in character, are the characteristics of the first sound of the heart when fluid effusion has taken place in the pericardium.

Another sign indicating the presence of fluid is flatness upon percussion over an area corresponding to the size, situation, and form of the pericardial sac. When the pericardial sac is filled with liquid without being dilated, it forms a pyriform tumor within the chest, the apex of which raises nearly to the sternal notch; the base is at the sixth or seventh intercostal space; the right lateral border is somewhat beyond the right margin of the precordia, and the left laternal border is considerably beyond the nipple. Within this area there is notable dulness or flatness upon percussion, together with absence of respiratory murmur and vocal resonance. It is by means of these signs that we are able to mark out the boundaries of this pyriform tumor upon the chest. When the quantity of liquid effusion is only moderate, the sac being only partially filled, the same physical signs are present, but we do not get the peculiar shaped tumor. In some cases in which the quantity of fluid in the pericardial sac is very great, flatness upon percussion is present over the greater part of the anterior aspect of the chest. The increase or diminution of liquid in the second stage of pericarditis may be determined by percussion and auscultation. When the quantity is much diminished, the friction murmur, if it has disappeared, returns and remains constant until the pericardial surfaces become agglutinated. Not infrequently, when the pericardial sac contains a large quantity of fluid, the friction murmur can be heard if the precordia is auscultated while the body of the patient is bent forward. In some cases the pericardial friction sound can be heard throughout the entire course of pericarditis without change in the position of the body of the patient, although there may be a considerable quantity of fluid in the pericardial sac. If, therefore, we find a pericardial friction sound in connection with other symptoms, we have the evidence upon which to base a diagnosis of pericarditis; and if the friction sound disap-

pears, the first sound of the heart becomes distant and valvular in character, and there is notable dulness or flatness upon percusion over the precordia, we have the evidence upon which to base a diagnosis of pearicrditis with effusion of liquid into the pericardial sac.

These, then, are the important physical signs by which you will recognize the presence of endocarditis and pericarditis, and if they are thoroughly studied and carefully applied you will have no great difficulty in arriving at a correct diagnosis.—*The Medical Record.*

On Some of the Uses of Ergot.

By Clinton Cushing, M. D.

[Read before the Alameda County Medical Association.]

The value of ergot as a remedy, seems to be founded wholly upon the fact, that it is able to produce contraction of involuntary muscular fibre, whether in the coats of the blood vessels, in the uterus, or in the bladder. Dr. Drasche, in experimenting on the use of ergotin subcutaneously, found that the pulsations of the heart were lessened from four to six beats per minute, and the sphygmograph demonstrated a decided contraction of the calibre of the blood vessel.

Frequent experiments have proved that ergot, given in large doses, or in small doses for a length of time, acts as a poison upon man and animals; the poisonous symptoms, or ergotism, as it is called, consisting of languor, faintness, vomiting, diarrhœa, numbness of the extremities, dry gangrene, convulsions, and death. As a remedy, it has been used principally on account of its oxytocic powers, and although opinions are still held to the contrary, I think there can now be no doubt, that if it is properly prepared, and given in a sufficient dose, it will produce powerful and continued contraction of the gravid uterus, especially if uterine action had been previously excited from other causes.

It is advised in tedious labor, where the os is dilated, or soft and dilatable, and where the diameters of the pelvis and the condition of the soft parts offer no considerable resistance to the passage of the child's head, but the pains are weak and inefficient. I would here state, that I never give a patient ergot during labor until after the birth of the child, for the following reasons. First. Statistics from many sources have proved conclusively, that great danger to the child results from its use, as a consequence of the unremitting and powerful contractions of the uterus, interfering in a marked manner with the circulation of blood, both in the uterus and in the child, and death to the child results in about twelve per cent. of the cases where it is used to hasten tedious labor. Next, the unremitting character of the pains forces the head of the child forward in such a continuous and powerful manner againts the soft parts that laceration of the cervix uteri aud of the perineum is likely to ensue, and sloughing of some portions of the soft parts, producing vaginal fistula. In other words, when you give ergot to a woman in labor, you have set in motion a power which may do much harm, and which you are helpless in controlling or moderating. On the other hand, you have a remedy in the obstetric forceps that is equally, or more efficient, and perfectly under your control.

Other sins are charged against ergot when administered to the lying-in woman, such as rupture of the uterus, hour-glass contraction, retention of the placenta, etc. But of these I have no personal knowledge.

For the past ten years I have invariably followed the practice of giving the mother a teaspoonful of the fluid extract of ergot immediately after the birth of the child, and where the labor has been prolonged, or where there is much pain or distress, I combine with it one-sixth of a grain of morphia. By this means I secure a firm contraction of the uterus, preventing the formation of clots of blood within its cavity, with a less degree of afterpain, as the result. Indeed in many cases, there is no afterpain of consequence. Especially is this practice to be recommended where the patient lives at some distance from you. When this is the case, I usually leave several doses of ergot to be given in case of hemorrhage. In this way I leave my patient, guarded against the *evil effects* of post-partum hemorrhage.

During the first three months of pregnancy the power of ergot to produce contractions of the uterus is much less, owing to the fact that the muscular tisue is not sufficiently developed for it to produce its full effect.

Atony of the bladder, whether occurring in old men or as a result of over distension of the organ, has often been cured, or much relieved by the use of ergot.

Dr. Wm. A. Hammond reports the successful treatment of three cases of vascular tumor, by throwing into the tumor with a subcutaneous syringe from a half drachm to two drachms of the fluid extract of ergot at intervals of ten days. As no trace of inflammation followed he attributed the good result entirely to the action of the remedy upon the organic fibres of the vessels.

In purpura, in hemorrhage from the lungs,

stomach, bowels, kidneys, bladder or nostrils, it has been used repeatedly with success. In my hands it has succeeded in several cases of bleeding from the nostrils, lungs and bowels.

If a prompt action is desired, it is best to give it subcutaneously, thirty to forty drops of the fluid extract, every hour, until the result is obtained. Those who have used it in this way claim that the fluid extract is more reliable than the so-called ergotin, and that no abscesses or ill effects follow its use. Ergot has also been successfully used in incontinence of urine, in five grain doses. It is considered the best known remedy in all cases of paralysis dependent upon a hyperemic condition of the vessels of the spinal cord.

Several cases of internal hemorrhoids have been reported cured by injections of ergot per rectum, but in several cases in which I have used it, no good result followed.

It has been used for many years for the purpose of inducing contraction of the uterus, in cases of uterine polypi, and thus forcing them down within reach so as to facilitate their removal; but it is only of late years that it has been used to get rid of fibrous tumors of the uterus. It has now been used in a large number of cases, and with success, where the fibroid tumor was sub-mucous, or in the wall of the organ.

In this connection I wish to report a case that occurred in my practice last year. On April 20th, 1876, I was sent for to attend Mrs. S., who was suffering from a profuse uterine hemorrhage. She informed me that she was forty-eight years of age, and had menstruated regularly, but each time lost a large quantity of blood, and the flow sometimes continued for two weeks; that she had been suffering in this way for five years. She was in good flesh, but was very anemic and had considerable œdema of the feet and legs. Pulse 130 and weak; abdomen very large, looked like a woman six months pregnant. She had been under the care of several different physicians, but remedies for the hemorrhage had not been of benefit. Her abdomen had been steadily enlarging for several years, but her physicians had never examined her as to the cause. Upon examination I found the uterus extended as high as the umbilicus; its cavity measured five and a-half inches in length; the anterior wall seemed much thinner than the posterior, and I diagnosed a fibroid tumor occupying the posterior and upper part of the organ. I ordered rest in bed until the hemorrhage ceased, and to take forty drops of the fluid extract of ergot three times a day, between meals. The loss of blood gradually ceased, and at the end of ten days very severe uterine pain supervened, necessitating the discontinuance of the remedy for a few days. With the pain there appeared a yellowish watery discharge from the uterus containing flakes of grayish-white material.

The use of the ergot was continued for nearly four months, with occasional intermissions on account of the severe pain. The hemorrhages grew less and less troublesome, and the uterus steadily decreased in size. At the end of five months, an examination showed it to be but little above the normal size; under the use of the tinct. ferri chlor. the health had much improved. She is now in excellent health, and her menstruation is regular and normal. That the cure was due to the action of the ergot there can be no doubt. Whether the tumor was wholly between the uterine wall and the mucous membrane, or whether it involved the structure of the wall of the organ, I am unable to say.—*Pacific Med. and Surg. Journal.*

[Prof. Liebig's food for children.—At the request of several correspondents we republish this from the American Journal of Medical Sciences.]

A New Soup for Children.

BY JUSTUS VON LIEBIG.

For mothers, who have not the good fortune to be able to nurse their own children, or who are deficient in nourishment for their young, the choice of a food suitable for the support of the latter is an object of importance; custom and opinions differ for the most part on the subject, and as the simple laws of nutrition, which should determine this choice are, generally speaking, wholly unknown to the persons to whom the selection must be left, the bodily development of the children is frequently impaired in earliest infancy by the mode of feeding them (see my *Chemical Letters*, Letter 30, p. 56). It is evident that a child, deprived of its mother's milk, without a nurse, (the choice of whom is difficult, and is often connected with dangers of another kind), can be properly nourished only when the food given to it has the same nutritive value as woman's milk.

To obtain proper ideas on this subject, it would probably be well to call to mind that milk contains two kinds of matters, which minister to different functions in the system; from the casein in the milk the principal constituent of the blood is formed, and from the latter the principal constituent of the flesh; the butter and the sugar of milk serve various other purposes in the body, and are used, in their ultimate form, for the development of animal heat.

The food of man and that of animals have a composition similar to that of milk, in so far as they invariably consist of a mixture of two kinds of matters, of which one fulfils the same office as the casein, while the other supplies the place of the fat and of the sugar of milk; the formation of blood or flesh, and the temperature of the body being thus maintained through the food.

The seeds of the cerealia contain a substance identical with coagulated casein, the seeds of the leguminosæ, peas and beans, contain a matter identical with the cheese as it exists in milk. It is true that the flour of the cerealia contains no sugar of milk and but little fat, but it is rich in starch, which in the stomach is converted into sugar.

For the normal maintenance of the vital process the relative proportion of blood and warmth-creating matters in the food of the animal is not indifferent; in order to increase in his bodily weight, or to grow, the individual needs not only an increasing mass of food, but a varying proportion of blood and warmth-creating constituents in the food.

It is the great merit of Haubner, that he was the first to obtain practical recognition among agriculturists of the importance of the correct proportion between both classes of substances in the feeding of animals, to which I directed attention in my *Chemical Letters*, and through the admirable investigations of Henneberg, Stohmann, Lehmann, Knop, Arendt, Bähr, Pincus, and others, connected therewith the principles of a theory of feeding have now been obtained, by which the agriculturist or the producer of meat and milk is enabled so to replace the milk in the feeding of the calf, or the hay, the universal food which nature presents to the herbivora, by the admixture of such food at his command, as turnips, oat and rye straw, potatoes, rape-cake, pea-meal, &c., that the latter produce a nutritive effect equivalent to that of milk or hay.

The investigations just alluded to have shown that if the flesh and warmth-creating nutriments, corresponding to the age and wants of the individual, are given in the correct proportion, both produce a maximum of nutritive effect.

A deficiency of warmth-creating constituents may be replaced by an excess of blood-creating matters, but this excess then loses its power to increase the weight of the body.* The warmth-creating matters are incapable of producing blood; an excess beyond the proper proportion loses its efficiency.

In this it is assumed that as much food be given to the individual as he has inclination or appetite to eat.

If we suppose that a boy, for the simple maintenance of his bodily weight, needs half an ounce of blood-and-flesh-forming aliment, this will be obtained in potato diet, if the boy is able daily to consume twenty-four ounces of steamed potatoes, for the increase of his muscular substance a greater quantity must be used.

Potatoes contain for one part by weight of blood-forming substance, 9 to 10, say ten parts of warmth-producing matter (starch). In 24 ounces of steamed potatoes there are 5 ounces of starch, of which only 2½ ounces are used in the body for the production of heat; the balance of 2½ ounces passes off by the bowels unused.

In five ounces of peas we have one ounce of blood-forming substance (consequently as much as in 48 ounces of steamed potatoes) and 2½ ounces of starch. It is evident that if we make a mixture of 12 ounce of steamed potatoes, and of peas-porridge prepared from 2½ ounces of peas, we have in it:—

	Blood-forming substance,	Warmth-producing substance.
12 ounces of potatoes contain	0.250	2.50 ounces
2½ " peas "	0.500	1.25 "
14½	Total 0.750	3 75 ounces.

or the proportion of 1 : 5 corresponding to the wants of the body of the boy. The boy will not only more easily assimilate this mixture of 14½ ounces of peas-porridge and potatoes than the above 24 ounces of potatoes alone, which have only imperfectly nourished him, but he will also in this less weight of food appropriate one-fourth more of blood-forming aliments —an excess which is necessary for his growth— that is, to increase his bodily weight.

This example may exhibit the principles which have guided me in the preparation of a food for nurselings: as I have mentioned, they have been verified in a remarkable manner in the feeding of cattle, in the production of flesh and milk.

The composition of milk is not constant; its amount of casein, sugar-of-milk, and butter, varies with the food with which the individual is nourished. According to the analysis of Haidlen, the milk of a healthy woman contains in 100 parts 3.1 of casein, 4.3 of sugar-of-milk, and 3.1 of butter; woman's milk is in general poorer in casein, then cow's milk.

If we assume that 10 parts of butter produce in the animal body the same warmth-creating effect as 24 parts of starch, and likewise 18 parts of sugar-of-milk that of 16 parts of starch, we can by the aid of these numbers

compare the nutritive value of milk with that of the flour of the cerealia, if we express butter and sugar-of-milk in their equivalents of starch.

In this manner we find that there are contained:—

	Blood-forming matters.	Warmth-producing matters.
In woman's milk -	1	3.8
" cow's milk, fresh -	1	3
" " " skimmed	1	2.5
" wheaten meal -	1	5

Woman's milk is poorer in salts than cow's milk; but it has a stronger alkaline reaction, and contains more free alkali, which *in the different sorts of milk is potash.*

It is evident that we can easily calculate a mixture of milk and flour (a milkpap), which shall contain precisely the same proportions of blood and warmth-producing aliments as woman's milk (namely, 1 : 3.8); but this mixture could not in other respects replace woman's milk, as wheaten flour has an acid reaction, and contains much less alkali than woman's milk, and (as we must suppose), than is required for normal blood-formation. Moroever, even if starch is not unfitted for the nourishment of the child, by its conversion into sugar during the process of gastric digestion, an unnecessary labour is imposed upon the system, which the latter is spared, if we first convert the starch into the soluble forms of sugar and dextrin. This can easily be done by adding to wheaten flour a certain quantity of malt flour. If we boil milk with wheaten flour to a thick pap, and add to the latter a certain amount of malt flour, the mixture after a few minutes becomes fluid, and acquires a sweet taste.

On this conversion of the starch into sugar, and on supplementing the alkali in the milk, depends the formation of the new soup, which I shall now describe.

The skimmed cow's milk usually sold seldom contains more than 11 per cent. of solid combustible matters (4 casein, 4.5 sugar, 2.5 butter); 10 parts of cow's milk 1 part of wheaten flour, and 1 part of malt flour, afford a mixture which possesses very nearly the nutritive value of woman's milk:—

	Blood-forming constituents.	Warmth-producing constituents.
10 parts of cow's milk contain	0.4	1.00
1 part of wheaten flour contains	0.14	0.74
1 part of malt flour contains	0.07	0.58
	0.61	2.32
=	1	3.8

The malt flour contains 11 per cent. of blood-forming matter, of which, however, only seven parts enter into the sonp,

As wheaten flour and malt flour contain very much less alkali than woman's milk, this must be supplied in the preparation of the soup. I have found that the addition of 7¼ grain of bicarbonate of potash, or of 3 grammes or 45 grains of a solution of carbonate of potash, containing 11 per cent. of the salt, suffices to neutralize the acid reaction of both kinds of flour.

In the preparation of the soup we proceed as follows: One part by weight (half an ounce) of wheaten meal is placed in the little vessel intended for making the soup, to this milk is gradually added in small portions with constant stirring, the conglomeration of the meal into lumps being carefully avoided; this mixture is heated with diligent stirring to the boiling point, at which it is kept for three or four minutes, and is then removed from the fire.

One part (half an ounce) of malt flour is now weighed, carefully mixed with 45 grains of the solution of carbonate of potash just mentioned, and with two parts by weight of water, and this mixture is now added with constant stirring to the milk-pap; the vessel is then covered to avoid cooling; and is allowed to stand for half an hour.

It is advisable, after the malt flour, to place the vessel in hot, nearly boiling water, so that the mixture may the longer keep warm; it thus becomes thinner and sweeter. After this time the whole is placed once more on the fire, is allowed to boil again, and the soup is then passed through a fine wire or hair-sieve which retains the bran of the malt flour.

Those who are acquainted with the mashing process need not be reminded that after the addition of the malt the temperature should not exceed 151° F. The above directions are so calculated that, including the time used in weighing and mixing the water with the malt flour, we have, after the addition of the latter to the hot milk-pap, a mixture of the temperature of 151° F.

The following process is simpler, and, as cooks maintain, more convenient than that just described:—

Half an ounce of wheaten meal, half an ounce of malt flour, and seven and a half grains of bicarbonate of potash, are weighed, mixed first with one another, and afterwards with an ounce of water, and lastly with five ounces of milk; the mixture is then heated with constant stirring, over a very gentle fire, until it begins to grow thickish: the vessels is now removed from the fire, and its contents are stirred for five minutes; these are then heated once more and again removed, when a new thickening occors; lastly, the whole is brought to a boil. After the separation of the bran from the milk through a fine sieve the soup is ready for use.

Wheaten Meal.—For this ordinary new meal is chosen, not the finest or the first shot meal, which is richer in starch than the whole meal.

Malt.—Barley malt can easily be procured from any brewer. In Germany, or rather in Munich, the malt is so much dried that the starch of many grains appears to be half-roasted. This malt employed in making the soup gives to the latter a taste of bread, which is not unpleasent; usually the malt contains an admixture of many seeds of weeds, which must be picked out with the hand. An ordinary coffee-mill answers for preparing the malt flour, the latter must likewise be separated by means of a hair sieve, not two fine, from the chaff. Malt prepared from barley is to be preferred to that from oats, wheat, or rye.

Carbonate of Potash.—For the preparation of the solution the ordinary kali salt, carbonas depurata of the pharmacies, answers very well; two ounces of the salt are dissolved in sixteen of water. If spring water be used, there is generally a precipitate of some carbonate of lime; after an hour the fluid becomes quite clear and bright. The carbonate of potash must not be greasy or damp. The bicarbonate of potash is the ordinary crystallized salt.

Note.—In order to avoid the rather troublesome weighing of the flour, we may observe that a heaped tablespooful of wheaten meal weighs nearly exactly half an ounce; a heaped tablespoonful of malt-flour, wiped off at one-half with a card, likewise weighs half an ounce.

For measuring the solution of potash an ordinary thimble answers; this when filled holds nearly three grammes (45 grains, 2.8 cubic centimetres) of solution of potash.

For the milk and the water two ounces are weighed in an ordinary tumbler, then five ounces of water, and the heights at which both quantities of fluid stand are marked on the outside of the glass by attaching pieces of paper.

When the soup is prepared it is sweet as milk, and the further addition of sugar is unnecessary; it possesses double the concentration of woman's milk, and can, which is not unimportant for sucklings, be given in the nursing bottle. If it has been heated to the boiling point, it keeps good for twenty-four hours; if this has not been done it turns sour and coagulates like milk; if the addition of potash be neglected, it cannot, in general, be heated to the boiling point without coagulating. In the absence of the potash the soup is difficult of digestion like ordinary milk-pap.

I was first led to prepare this soup by the facts that one of my grandchildren could not be nursed by its mother, and that a second needed a more concentrated food in additon to its mother's milk; the fathers of both children are physicians, who are well able to judge of the effects of the soup. It has proved both in my own family and in other families where it has been introduced, to be an excellent food, and I myself often use it; in coffee it supplies the place of tolerably good cream.

The soup has a slightly mealy taste, to which children soon become so accustomed that they prefer this food to any other. A physician of this place, Dr. Vogel, who has an extensive practice among children, tried to introduce this soup into the families of poor people; in general it did not find acceptance with them, because the thick milk-pap lost its consistence on the addition of the malt, and became thin. The people imagined that its nutritions quality was connected with the thickness of the pap, and was diminished by the malt.

[We have used this children's food, prepared according to the directions of Prof. Liebig, and have found it to a most light, easily digestible, and nutritions article of food.]

Poisoning by Chloral.

Dr. August Frank calls attention (*Berliner Klin. Wochens,*—to the great variety of doses recommended as maximal by different writers upon chloral. These range from two grammes (thirty grains) to eight grammes (two drachms). The Prussian Pharmacopœia has adopted one to five grammes as the range. Frank gives also two cases of drunkards coming under his care, in whom 1.25 grm. caused death in one instance, while 2.5 grm. produced a fatal result in the other. The symptoms in the first case were quiet sleep lasting some eight hours, then sudden collapse, brief convulsion, and death. Moderate congestion of the brain, slight intestinal catarrh, and emphysema of the lung were the only post-mortem appearances. In the second case the patient, after taking the meditine in two doses immediately following each other, fell into quiet sleep. Six or eight hours later he began to breathe irregularly, and before a physician could be summoned was dead. Excepting unusual fluidity of the blood, no abnormal post-mortem appearances were observed. The chloral was of good quality, and had been used successfully in other cases. Frank regards 2.0 to 2.5 grm. (30 to 40 grs.) as the proper maximum dose of chloral.—*Drug. Circular.*

Notes on Current Medical Practice and Opinions.

Metallic Poisoning from a Sanitary Standpoint.

At a meeting of the New York Public Health Association, on November 8th, Dr. Allan McLane Hamilton read a paper on Metallic poisoning that physicians are liable to meet with in every-day life. He maintained that there is comparatively little of genuine lead-poisoning, though a great amount of absurd superstition relating to that form of poisoning.

The red and brown hosiery, so commonly worn by children and ladies of to-day, and even of late, by gentlemen, is liable to produce very serious varieties of neuroses from metallic poisoning. Serious results have followed the use of green tickets distributed by Theatre's, Railroads, &c.

The Hair-dyes and liquid cosmetics, for the face, are all dangerous to health, and ultimately the complexion is impaired by what was intended to improve it.

In this connection we might allude to some cases of Poisoning by *Seltzer Water*, recently reported as having occurred in Berlin. A number of persons, during the summer, were poisoned by drinking Seltzer water from a certain stand. An examination of the water showed a large percentage of copper. The presence of this poison was easily accounted for. The water was brought from the Seltzer-water factory to the retail shops and stores in copper kettles, which were lined with tin, and wherever the tin lining was defective, the copper was corroded and absorbed by the water.

Our readers will recall to mind an abstract which appeared in "*The Medical Record*" a short time ago, on the subject of an epidemic of lead-poisoning that occurred in Paris. By a remarkably close and sagacious analytical investigation, together with much detective ability, Dr. Decamps ascertaind that the poison was conveyed in bread baked in ovens that had been heated by old wood taken from buildings that were being demolished, and which wood had many layers of lead paint upon its surfaces. The result of this investigation was laid before the Municipal Council of Paris, and the answer has been the prompt issue of a decree forbidding the use of painted wood in heating ovens. "American leather-cloth", as it is called, has been, for some time past, under the ban of suspicion, as containing large and poisonous quantities of lead.

In Germany, where this enameled or "leather-cloth" is largely used, this suspicion has been confirmed by the occurrence of numerous cases of sickness among children who have been carried about in children's wagons which are covered with this cloth. The symptoms were invariably those of lead-poisoning.

An investigation was recently undertaken at the instance of the Imperial Health Office, and in different specimens of the cloth, both of German and foreign make, the enormous quantity of 45.7 per cent. of metallic lead was formed; from a piece of cloth weighing 10 grammes, a mass of lead weighing 4.25 grammes could be obtained.

The cloth burned readily, and drops of lead reduced to the metallic form could be seen running off, even when only a small piece of it was ignited. When exposed to direct sun-light, the varnish cracked and began to peel off.

The Board of Health, consequently, earnestly warns the public to beware of this wagon-covering, "in the Sanitary interest of the children."

Thus, it will appear that the sources of supply of these subtile and dangerous poisons are numerous and of singular variety. To avoid, as far as possible, the consequences of so much that is seriously deleterious it seems that not only should large powers be granted to local Health Authorities, but that their diligence in tracing and publishing these obscure sources of evil should be constantly stimulated, and for their reward their recommendations should promptly be approved and as promptly carried into execution.

CERTAIN SANITARY POINTS IN THE CONDITION OF INDIA.

Although small pox is so prevalent in India as to have a goddess of its own, there is a general fear of vaccination, and it is only by persistent coaxing that the practice makes any way at all. The best Sanitary authorities are of opinion that very little can be done to make the people careful of health until they are awakened to the dangers of dirt and filth; and although some success has attended an effort to make tracts giving Sanitary instruction popular, the lessons thus imparted can only filter very slowly through the masses.

India continues the cultivation of cinchona, and, after many experiments, now produces quinine in quantities sufficient to warrant the expectation that some day this valuable febrifuge may be within the reach and the means of the people generally.

Malaria seems to be on the decrease, partly

owing to drainage, and partly to increased cultivation.

Terrible as are the immediate consequences of such a famine as that which has overtaken Madras, the worst of all its consequences is perhaps the encouragement it will give to the depressed state of mind which shuns all exertion and prompts men either to lie down and die, or to seek just enough to keep them half alive from Government and the charitable. Emigration gives no relief to India.

"THINKING IN MEDICINE."

Helmholtz's oration on the subject of "thinking in medicine"* is likely to elicit much discussion and controversy. It is entirely directed to the disparagement of *a priori* methods of research. "Every metaphysical conclusion" he lays it down, "is either a fallacy or an empirical conclusion in disguise."

YELLOW FEVER. (CLINICAL NOTES.)

The candid statement of personal experience of an observing physician during an Epidemic of yellow fever is something to value and remember.

Dr. Benjamin S. Purse of Savannah, Ga., has reminded the readers of the Medical Record of an article he published in that journal as long ago as 1872. Recent experience has confirmed his views as regards the proper treatment of that malady. An outline sketch of his views, as now recorded in the same journal, will doubtless be interesting, possibly for the sake of certain analogies which we may be able to discern between yellow fever and the conditions, within our experience, at the North, which simulate that fever.

"Yellow fever cases may be divided into three classes, viz:

1st. Those which terminate favorably without any of the graver symptoms appearing.

2nd. Those cases in which black vomit and black stools occur.

3rd. Those in which the nervous system becomes most deeply implicated, caused by the previous excessive use of alcohol. I have classed them in the order of their gravity."

Dr. Purse always began his treatment by the use of the mercurial purgative;—

℞ Ol. Ricini..... ʒ j.
Hydrarg. Chl'd. mite..grs. x. M.

which if thoroughly mixed and administered, acted rapidly and without violence. Possibly this laxative might have to be repeated, within five or six hours. After the purgative has been given, and without waiting for its action, the doctor orders the entire surface of the patient's body to be sponged over with

℞ Tr. Capsicum..... ℥ ii.
Alcohol..... ℥ vi. M.

and then wrapped up in blankets. This soon causes diaphoresis. Quinia in ten grain doses is given hourly to the number of three doses, and twenty grains of the Bromide of Potassium is given with each dose of the quinine. The next morning the three doses are repeated within five and seven o'clock, A. M. The following day twenty grains are given in two doses within the same hours of the morning. As the temperature becomes normal, which usually occured about the fourth morning, the quinia is gradually diminished to from 3 to 5 grains daily, untill all danger of relapse is removed. The bowels are to be kept open, as at least one motion a day is required.

In the treatment of the second class, i. e. the black vomit, Dr. Purse acts upon the theory that the black vomit is a conservative effort on the part of nature, and that those cases of black vomit which recover upon the expectant or do-nothing treatment, would have died if the black vomit had not relieved the distended vessels of the portal circulation; "The presure of the distended vessels, though a result, in its turn aggravates the cause". The stomach, rendered irritable by congestion, in its efforts at emesis ruptures the over-full vessels, and black vomit *respites*, if it does not always save the kidneys, and other highly engorged organs.

In the treatment of this stage of the disease, the Doctor uses first the Calomel and Castor oil purgative, he then applies a blister to the epigastric region and orders the patient to have the same sponging as heretofore described.

Indeed each stage of the disease, in Dr. Purse's opinion, depends for relief upon first the purgative and then the applications of Capsicum, and the internal doses of quinine, with a vigilant watching of symptoms that will enable the doctor to remove incidental conditions that are not Pathognomonic of this disorder though grave in their consequences. "The shock to the nervous system is so great in this fever (being particularly so in this type of the disease), that the patient is left in a collapsed condition. This is more or less marked in different cases." Anticipating, as far as possible, this state of nervous depression the doctor gives, very soon after the subsidence of the fever, Phosphorus and Ext. Nux Vom., and feeds his patients milk punch, beef essence, eggs, etc. If the phosphorus causes the tongue to become dry and glazed, this condition is coun-

*Das Denken in der Medicin Rede von Dr. H. Helmholtz, Berlin; Hirschwald, London; Williams & Norgate.

teracted by a few doses of turpentine emulsion.

"If the liver is kept active from the commencement of the disease, *black vomit* cannot occur. We can go a little farther and anticipate the fever entirely, by the timely administration of a mercurial cathartic, followed for a few days with small doses of quinine."

Dr. Purse further says:—"I consider opium to be especially objectionable in this disease—*and it ought never to be used.* Any medicine which checks the intestinal secretions is injurious.

The yellow-fever poison acts directly upon the cell-structure of the liver, paralyzing its functions. This paralysis of the liver, preventing the portal blood from passing through that organ, causes congestion of the afferent branches of the portal vein. If the congestion be not relieved either by nature (black vomit) or art (purgation) in time to prevent it, the kidneys and other organs become also congested. To prevent and relieve this condition, the secretions particularly of the liver and intestinal canal, must be kept free. This is the most important fact to be remembered in the treatment of this disease. The black vomit will invariably cease as soon as active purgation is established.

The physician must divest his mind of the *gastrophobia* so prevalent in the treatment of this disease. The stomach is not *inflamed* but *passively congested*, and its irritability passes off with the congestion. The depression or asthenia is greater in this fever than any other, and the patient can and should be more freely nourished than in malarial fever. Insomnia is a very frequent sequela.

Phosphorus and Nux Vomica are the remedies to meet the insomnia and asthenia. When convalescent, the patients should be removed to a higher latitude if practicable, or at least out of the epidemic influence for several weeks."

MIASM AT WASHINGTON, D. C.

An important local source of miasm at the National Capital is soon to be earnestly complained of by the civil authorities of the District of Columbia, in a report to be made to the President.

The Potomac River in front of the City of Washington, is fringed with broad expanding marshy meadows which are covered with a rank growth of vegetation, and in Autumn, when it decays, they send forth a poisonous element which mingling with the vapors from the river renders the Western part of the City very unhealthy. The injurious effects of this malaria are especially felt at the White House, the new State Department building, and in the War and Navy Departments. The construction of works between Georgetown and Washington caused the current of the Potomac to flow over to the Virginia side, and has left a large extent of flats immediately in front of the City, from which the water recedes at every ebb of the tide. Fifty years ago the channel of the river was on the Washington side, and there was sufficient depth of water to allow vessels of considerable draught to come up to the wharves at the foot of Seventeenth street, near the War and Navy department. The Commissioners of the District desire to secure an appropriation from Congress to enable them to fill up the flats with gravel, in the hope of redeeming a considerable quanity of land, which will be valuable, and of extinguishing the malaria that arises from these unimproved shores.

DETERMINATION OF UREA IN URINE.
(NEW METHOD.)

Prof. Henry G. Piffard, of N. Y., has given the profession a very reliable and ready method of estimating with precision the amount of urea present in any specimen of urine. Dr. Geo. B. Fowler, of N. Y. also, very recently, earned an alumni prize for an essay illustrating a method, perhaps even more convenient and expeditious, of obtaining the same estimate. Of Prof. Piffard's method we will, at this time, take the the liberty of noting the principal facts. The method depends upon the decomposition of urea, and determining the loss of *nitrogen* and *carbonic acid* at the expiration of a given time after the mixture of the reagent with the urine. The reagent used is a solution of Mercury in nitric acid and water, which, however, holds in solution as the result of decomposition, *nitrous acid* along with *nitrite of Mercury.*

The action of this reagent upon urine is to decompose urea, liberating *carbonic acid* and *nitrogen*, while *water* and *ammonia* remain in the flask. The decomposition may be expressed as follows:

$$2\,(CH_4N_2O) + N_2O_2 = H_2O + 2H_3N + 2CO_2 + 4N.$$

The apparatus necessary is simply a flask, fitted with a cork with two perforations, through one of which passes a short tube to allow the escape of gases, through the other a stoppered tube capable of holding two or three fluid drams of the reagent. (A still simpler modification is to take a small flask, about two ounces capacity, in which a short test tube may be inserted to hold the reagent, similar to some forms of carbonic acid apparatus.)

The reagent is made by dissolving 1 c. c. (or one fluid dram), of metallic mercury in 20 c. c. (or 20 fluid drams), of pure nitric acid, and after the solution is complete, add 20 c. c. (or 20 fluid drams of water).

To estimate the urea in any specimen of urine (say two fluid drams), introduce the urine in the flask, and the reagent in the tube. Carefully introduce the latter into the flask without allowing the fluids to mix, and then weigh the entire apparatus with great accuracy. *Note the time*, then allow the reagent to mix with the urine, and at the expiration of *fifty minutes*, again weigh the apparatus, *and note the loss of weight.* The loss of weight will be equal to the amount of urea present. Were the reaction to be allowed to go on until all complete, it would require several hours, and the loss would be in proportion of twelve parts for every ten parts of urea present, but careful experiments of Dr. Piffard, assure the fact that at the expiration of *fifty minutes* the loss is *almost identical* with *the weight of urea present.*

"HOWARD MEDAL" (ENGLAND.)

"The following is the title of the essay to which the medal will be awarded in November, 1878: 'The Effect of Health and Disease on Military and Naval Operations.' Moreover, the Council of the Statistical Society have decided to grant the sum of £20 to the writer who may gain the 'Howard Medal' in November, 1878.—*Sat. Review, Lon.*

We are under the impression that this prize is open for competition to all writers without reference to their British or other nationality. It is certainly worth competing for, if, upon inquiry, it should be found to be a prize open to the world without restriction.

DIPHTHERIA, CROUP AND TRACHEOTOMY.

A French writer, M. Revilloid, sums up his views of Diphtheria, Croup, and Tracheotomy in the following sentences:

"Diphtheria is an acute specific malady, and characterized anatomically by peculiar false membranes in the respiratory tract. It manifests itself by variable lesions—at one time a benign form in which the symptoms depend solely upon a local lesion, at other times a malignant one, where there is an exhibition of general infection.

A nosological distinction between croupal and diphtheritic affections, based upon pathological anatomy, does not conform to clinical experience. These two types belong to one and the same source, because, first, between them all sorts of intermediate forms are to be seen, both in local lesions and in general phenomena; and second, they develope in the same epidemic, under the influence of the same *contagium;* and third, often immediately succeed one another in the same individual. Like every infectious disease, the endemic diphtheria of cities is epidemic in the country. The mortality by diphtheritic infection is greater in the cities than in the country; in the hospitals than in the cities; in the large hospitals than in the small. It varies just as the infective force, according to the period and the country. Diphtheria distinguishes itself from other virulent maladies by the special receptivity which certain families offer, in virtue of which brothers and sisters are often attacked successively under conditions of time and place which do not admit any question of contagion. There is no specific against diphtheria. In the third stage, tracheotomy is indicated whatever be the condition of age, constitution, complication or asphyxia. Two-fifths should recover. But success depends upon subsequent attention, and the degree of diphtheritic infection. One of the most frequent causes of death after tracheotomy, is a trouble in the innervation of the pulmonary apparatus, and is really an extension of the paralysis of other parts, as shown by the expiring dyspnœa, anæsthesis of the trachea, and nutritive disorders of the lungs.—*La France Médicale;* 80, 1877.

INTERMITTENT HEMIPLEGIA.

Dr. A. D. Rockwell of New York, read a paper in June, 1877, before the American Neurological Association, in which the following case was narrated and remarks made: "The following case was, in its symptoms and progress, unique, interesting, and instructive; and as a *post-mortem* was fortunately obtained, although with difficulty, I think it worthy of brief mention. O. H. B., a stair-builder, aged forty-nine, and in the seeming enjoyment of a fair degree of health, was suddenly seized, one afternoon in the latter part of July, 1876, and while at work in his shop, with symptoms of dizziness. His power of speech was lost, and the left side became completely paralysed. In about twenty minutes these symptoms entirely disappeared, leaving him quite well. On the following day he remained quietly in his house during the morning, but in the afternoon resumed work, and at about the same time (4 P. M.) the attack recurred, but with less severity. For some three weeks thereafter paroxysms occurred every other day, and invariably in the latter part of the afternoon, rarely exceeding in duration, however, from ten to fifteen minutes. About the middle of Augnst he was prostrated by a similar but much more severe attack, this time, however, eleven A. M., being the hour of onset; and thereafter until the third of September, an attack occurred every day at eleven A. M., lasting some fifteen minutes; and between that hour and four P. M., the paroxysm would

recur from three to four times. On the fifth, sixth and seventh of September, the symptoms increased in severity, attacks occurring early every morning and repeating themselves at intervals of two or three hours during the day. From the day of the first attack until the latter part of August the patient's health remained pretty good; appetite fair; bowels regular; sleep in excess of normal. In the more severe attacks he was utterly unable to walk or speak; in those of less severity he could move with difficulty and speak indistinctly; but in all attacks the sensory symptoms were profoundly marked. On the eighth of September, when he came under my observation, he was beginning to show the effects of these repeated strokes, in a condition of pallor and general muscular weakness.

As to the sequel of treatment, I gave it with some hesitancy, since, in the light of subsequently ascertained pathological changes, it seems difficult to believe that the method employed, or indeed any form of treatment, could have availed much. I submitted the patient to a mild *seance* of general faradization. On the following day he returned, stating that no attack had occurred. He received similar treatment, and, in addition, directions to take the small dose of two grains of quinine three times daily. Two days subsequently, when he presented himself, he had had but one slight premonition of his difficulty.

On the twenty-fifth of September he was discharged as approximately well, and so remained until December fourth, when I was called to see him. I found him in his shop in Twenty-eighth street, with his left side completely paralyzed, articulation imperfect, inability to swallow, but with intelligence unimpaired. He was taken in a sleigh to his home in Harlem, where he died the following night. At a *post-mortem* held December 9th, by Dr. Henry T. Pierce—present, Drs. Brockway and Forbes, and the late Dr. H. H. Gregory—the following conditions were revealed: Venous congestion of the surface of the brain; pia mater covered with thin film of organized lymph from old inflammation; texture of the brain softer than normal; choroid plexus enlarged and cystic; basilar artery and part of the circle of Willis enlarged and atheromatous, with a considerable amount of serous effusion at the base of the brain. The mitral valve, as well as the liver, was in a condition of fatty degeneration.

No artery was ruptured, neither were we able to detect, in the course of a thorough and careful examination, any evidence of embolism or thrombosis. As the pathological changes above recounted seem hardly sufficient to account for the unusual course of the symptoms, or for the suddenness of death, it becomes of special interest to consider what was the probable cause. The kidneys were not examined, although it is probable that they were the seat of fatty or other degenerative changes; but from the fact that the patient was entirely conscious up to within a few moments of death, it is safe to exclude uræmia as a factor in the production of the final result. In cases where death occurs from the brain, and examination reveals no blood-effusion and no obstruction of vessels, it has been customary to refer to the case as one of simple apoplexy—a nomenclature as unsatisfactory as it is unscientific. Sudden and violent congestion of the brain, causing what Trousseau aptly calls "cerebral surprise," may, it is believed, be in itself sufficient to produce death; but the whole history of our patient readily excludes the possibility of this as a cause. There remains but one other condition in which one may reasonably hope to find an explanation of the above phenomena, viz: a spasm of vessels, which may be supposed to be associated with, or actually caused by molecular changes in the brain-tissue, rendering it unfit to discharge its proper function. The regularly intermittent character of these attacks of hemiplegia justified the inference that there was a malarial influence in the case, and renders, perhaps, the temporary results of treatment less unaccountable. The brain was not galvanized, the faradic current alone being used; but it does not seem difficult to believe that a current of sufficient tension, applied to the cilio-spinal centre so as to effect the sympathetic and its cervical ganglia, might, either reflexly or directly, exert a beneficial influence upon spasm of the smaller vessels of the brain.

"THE INFLUENCES WHICH ARE ELEVATING MEDICINE TO THE POSITION OF A SCIENCE."

The above is the title of an eloquent and learned address by Prof. T. G. Thomas, M. D., on the occasion of the thirtieth Anniversary Meeting of the New York Academy of Medicine, on Thusday Evening, November 15th, 1877.

Mouth-Wash.

The following formula was sent to the Dental Cosmos in answer to a correspondent asking a wash to heal and harden gums after teeth-extraction:

℞ Potassii chlorat..... 3 ij;
Tinct. krameriæ..... } aa fl. ℥ ss;
Glycerinæ..... }
Aquæ rosæ, q. s., ad..... fl. ℥ viij.
M. Sig. Rinse the mouth six or eight times daily.

EDITORIAL.

Extract of Malt.

Fifteen years ago we prepared Extract of Malt in considerable quantity, according to Liebig's method; but attention to it during the war was diverted, and a German chemist in our employ at the time, who had been a student under the celebrated Liebig, and had prepared it in large quantities in Germany, suddenly went to the war, and its pursuit was dropped.

A while since, a physician who used it at that time, remarked the difference in color and characteristic from that upon the market, and urged us to make some of the same he used at that time. We referred to our method, and have for some time been furnishing our immediate physicians, greatly to their satisfaction; they pronounce it just what *Extract of Malt* should be, and so superior in palatable qualities and medical results, that we have decided to give it to the profession hereafter. All that have used it speak decidedly of its medical effect, and we find in testing, it has greater power of conversion than even the German in the market, which is justly acknowledged to be superior to others.

Hypodermic Medication.

We publish the subjoined correspondence to preclude the error of similar misconception of terms on the part of others. Our correspondent is a well known and distinguished practitioner of medicine in a prominent locality, and we only suppress his name in deference to what we presume to be his wish.—*Ed.*

November 27, 1877.

Messrs. TILDEN, N. Y.

Gentlemen:—By this letter I wish to call your attention to one article of your No. 11, vol. XVI, of the fifteenth of this month, page 223; article called, Doses of Certain Remedies for Hypodermic Medication—by Prof. Von Schroff, Jr.

Nitrate of Silver, 12 gramme [grain 1.ss], for grs. CLXXX or 180.

Aconite, 12 gramme [about 1¼ grains]; same error as above.

Camphor, 12 gramme; same error.

Caffeine, etc., 5 gramme [7¼ grains]; 5 gramme is equivalent to ℈ IV or 0.80 grains.

Bi-chloride of Mercury, 25 gramme [about grs. IV], 25 × 15—I think, 375 grains.

Acetate, or Muriate of Morphia, 12 gramme [gr. 1ss], for 180 grains.

Nitrate of Strychnia; same as above.

As many people in this country practice without great knowledge, I believe that it will be very dangerous to let such articles pass without rectification.

I know many practitioners who will not hesitate to prescribe according to such article, and I ask you, for example, what will become of a physician and a patient after using, if possible, a solution of grammes 25 of Sublimate Corrosif in oz. 1 of water; when such dose (25 grammes), dissolved in 25 *quarts* of water constitute the liquor of Von Sweiten.

Thinking that I am acting in the interest of your publication, I am respectfully yours, &c.

New Lebanon, N. Y., Dec. 4, 1877.

DEAR SIR:—Your favor, twenty-seventh ult., is just to hand, and receives the prompt attention its importance merits.

We think, that upon closer examination of the article on "Doses for Hypodermic Medication," published in November Journal, you will perceive that you are under misapprehension as to the quantities prescribed. You mistake a *decimal fraction* of the gramme, distinctly so expressed, for the whole number. (Ex. gra. "Corrosive sub., dissolve .25—that is 25-100 or ¼ *gramme* in, &c.;") and so with all the rest of the instances pointed out. The fact that in every case the *Troy grain* weight is also given in brackets, would preclude any mistake by an ordinarily careful practitioner; and the simplest arithmetical calculation of the relative value of *grammes* and *grains*, would verify the correctness of the table.

Thanking you for the kind interest and motives prompting your communication—the best evidence of your appreciation of the "Journal," we are, Very Truly Yours, TILDEN & Co.

Messrs. TILDEN.

In reading your Journal I was pleased to notice that physicians could obtain samples of such remedies as Diphtherine, Firwein, Elixir Iodo-Bromide of Calcium, which appear to give entire satisfaction when used. It happened to be my fortune to use and introduce into this section of the State the first of your remedies, among them the Fluid Extract Opii Deod., and have always deemed this preparation as one of the best preparations of Opium in use. Quite frequently when I have ordered it from apothecaries, they have sent me a preparation of their own, not only inferior in appearance, but in effects, being to all intents Tinct. Opii, with a possible addition of sugar, etc.; after considerable trouble I am able to get yours.

I happen, like very many physicians, to be some miles from the nearest apothecary, and should I order an elixir without specifying your manufacture, I should get some one of a half dozen makers, and not unfrequently that made by the apothecary himself, as there is about here, a perfect mania among young apothecaries to make elixirs. With a majority of people an elixir is an elixir under all and any circumstances; whether properly compounded, or whether they contain the elements in the proportion represented, or are mere flavors or not; and it is too true physicians do not investigate all these points sufficiently for their own reputation.

The same remarks hold good in regard to fluid extracts. My experience has been extensive in

their use since you first introduced them to the medical profession. I have observed that many kinds disagree with certain delicate stomachs; while yours of the same article do not, and I can only attribute the difference of action to want of experience and skill in manufacture. In gelseminum I find a large amount of saccharine matter, which deposits around the neck of the bottle, and is very disagreeable as a pocket remedy.

I ordered of a Boston house, five pounds of your Elixir Gentian and Chloride of Iron; they sent me another kind, saying they were just out of Tilden's. This has happened in several instances, and many of my friends have been similarly treated; and their experience has been my own, that in the use of others, none have as yet equaled Tilden's. Please let me know what house in Boston sells your preparations, that I may order with the certainty of getting them.

For Journal Materia Medica.

CLARKSVILLE, Oct. 9th, 1877.

Colorless Tincture of Iodine.

℞ Tinct. of Iodine.....
Pure Glycerine.....*aa* ℥ 1.
Aqua Ammonia..... ℥ 1.

Mix—In twenty-four hours it becomes transparent. P. P. WHITESELL, Clarksville, Ind.

Ferrated Wine of Wild Cherry.

From the Pioneer Press Household.

DEAR SISTERS: I have often wished, while the opportunity was mine that I could write something for our column, that would do some one a real benefit, judging from my own experience. I believe I can do so now. I have been a sufferer many years from that insidious disease called Anæmia which saps the very fountain of life leaving nothing but weakness, extreme nervousness, and discouragement. I have taken iron, which is considered the specific for it, in many forms, but all without any apparent benefit. Last spring I was recommended to take Tilden's Ferrated Wine of Wild Cherry, but on sending to the druggist for it, was told the article, prepared by him was not kept on hand, but that he could prepare the same precisely. Believing the fraud, I tried it for several weeks, without the least help. Then I obtained the genuine from New Lebanon, New York, and its effect is truly wonderful. Refreshing sleep takes the place of wakefulness, strength of almost powerless muscle, and above all a returning interest in the duties and activities of life, which without health is but a weary burden. Mrs. GRANGER.

Elixir Iodo.

Extract from letter of J. H. POTTER, M. D., Schroon Lake Valley, Essex Co., N. Y., Oct. 5, '77.

"I use the Elixir Iodo extensively in my practice, and with the best results. As an alterative and deobstruent, and in the repair of wasted tissue its action is all that could be desired. In my own case it has proved remarkably effective in counteracting the torpidity of liver resulting from a protracted attack of chills and fever. No remedy that I have tried has acted with such quickness and certainty, and with its use I invariably gain in flesh and muscle, the appetite and the digestive apparatus are materially aided, and a general tonic effect produced throughout the system.

Firwein.

Messrs. TILDEN.

Dear Sirs—I have used "Firwein" in my practice for quite a while, and the result has been wonderful in many "hopeless," as it were, cases of Pulmonary disease.

I can truly say to Physicians try it in your Lung cases and you will not be disappointed with its action. Yours truly. A. F. PATTEE, M. D.

Diphtherine.

Dr. Gwin has a preparation of recent discovery which the doctors pronounce to be a really wonderful medicine in all cases of sore throat. It is called Diphtherine, and was compounded by the justly celebrated house of Tilden & Co., especially as a medicine for diphtheria, but it is equally as efficacious for coughs, sore throats, and all inflammations or affections of the throat. It isn't a patent medicine humbug, but a standard medicine.—*Hartsville Sentinel.*

Diphtherine Lozenges.

I have used the Diphtherine Lozenges in one of the most rapidly and certainly fatal diseases to which children are liable, excepting Diphtheria, that is Croup.

There is no holding of little hands and nostrils, or forcing the little patient to take medicine like this. The children take to the lozenges, and we thus overcome the forcible and unnatural method of half strangling the little one to compel it to take medicine.

In spite of the inability of children to bear with impunity the application of depressing remedies in this disease, we have their employment pushed to the utmost limit. Aconite, Belladonna, Veratrum, &c., given when indicated in water, out of a cup or glass, instead of out of a bottle or spoon (children will consider water as medicine when given in a spoon), with that most valuable preparation, Firwein, as an adjuvant of uncommon merit, will enable the physician to control the most obstinate cases. Mrs. Marion, of the Philadelphia Hospital, lost her voice from a neglected cold. One dozen lozenges fully restored it. It is most likely you will hear from her.

S. B. MERKEL, M. D.

Fluid Ext. Ergot, "Formula of 1874."

Extract from letter of W. G. TERRY, M. D., Henderson, N. Y., Nov. 15, 1877.

"I have used your Fluid Extract of Ergot, (Formula, 1874,) with excellent success.

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